

16-A
TRANSPORTATION
CONCURRENCY:
ROUTE 9 PLANT SITE

FINAL
ENVIRONMENTAL
IMPACT STATEMENT

Brightwater
Regional Wastewater
Treatment System

APPENDICES

Final

Appendix 16-A

Transportation Concurrency:

Route 9 Plant Site

October 2003

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King County has prepared a Draft Environmental Impact Statement (Draft EIS) and Final Environmental Impact Statement (Final EIS) on the Brightwater Regional Wastewater Treatment System. The Final EIS is intended to provide decision-makers, regulatory agencies and the public with information regarding the probable significant adverse impacts of the Brightwater proposal and identify alternatives and reasonable mitigation measures.

King County Executive Ron Sims has identified a preferred alternative, which is outlined in the Final EIS. This preferred alternative is for public information only, and is not intended in any way to prejudge the County's final decision, which will be made following the issuance of the Final EIS with accompanying technical appendices, comments on the Draft EIS and responses from King County, and additional supporting information. After issuance of the Final EIS, the King County Executive will select final locations for a treatment plant, marine outfall and associated conveyances.

The County Executive authorized the preparation of a set of Technical Reports, in support of the Final EIS. These reports represent a substantial volume of additional investigation on the identified Brightwater alternatives, as appropriate, to identify probable significant adverse environmental impacts as required by the State Environmental Policy Act (SEPA). The collection of pertinent information and evaluation of impacts and mitigation measures on the Brightwater proposal is an ongoing process. The Final EIS incorporates this updated information and additional analysis of the probable significant adverse environmental impacts of the Brightwater alternatives, along with identification of reasonable mitigation measures. Additional evaluation will continue as part of meeting federal, state and local permitting requirements.

Thus, the readers of this Technical Report should take into account the preliminary nature of the data contained herein, as well as the fact that new information relating to Brightwater may become available as the permit process gets underway. It is released at this time as part of King County's commitment to share information with the public as it is being developed.

INTRODUCTION

This technical memorandum responds to a specific Snohomish County Planning and Development Services request made as part of the Draft EIS public comment period for King County's Brightwater project, specifically Comment S3-150. The request was to conduct a concurrency study, according to Section 30.66B, formerly Title 26B SCC, of the Snohomish County Unified Development Code (SCUDC), for occupancy of the treatment plant at the Route 9 site. This memorandum should be considered a preliminary analysis because of the time-sensitive nature of the data used herein. Because the information used herein is likely to change, it is suggested that the concurrency study be prepared for final submittal at such time that the official permitting process begins for construction. Also, at the time of permitting King County will conduct the concurrency traffic analysis, following Snohomish County procedures, for Brightwater construction traffic conditions in the peak construction year of 2007.

Data that would likely change at permitting time include the inventory of pipeline trips¹, the list of arterial units in arrears, and the funded Snohomish County and Washington State Department of Transportation (WSDOT) roadway widening projects. Both the Woodinville-Snohomish Road (Snohomish County) and SR-9 widening (WSDOT) projects would likely be scheduled for completion in time to be included in the future year analysis presented in this memorandum. The inventory of development pipeline trips may change to include new development proposals such as the proposed Costco development south of the SR-9/SR-522 interchange on Woodinville-Snohomish Road. The Costco development has been under consideration and may generate at least 1,000 new daily trips, potentially impacting the surrounding roadway system. The status of this development and the road-capacity projects could change the list of arterial units in arrears as determined by Snohomish County.

A. PROJECT IDENTIFICATION

King County is proposing to build a new wastewater system, called Brightwater, by the year 2010. The Brightwater System would include a treatment plant to provide secondary treatment of wastewater, pipelines and pump stations to carry wastewater to and from the plant, and an outfall to discharge the treated wastewater to Puget Sound. The plant would provide secondary treatment capacity in 2010 for an average of 36 million gallons per day (mgd) of wastewater, with anticipated expansion in 2040 to 54 mgd. In a Draft Environmental Impact Statement (EIS), King County identified the Route 9 site north of Woodinville in unincorporated Snohomish County as the Preferred Alternative. The EIS also evaluated an alternative plant site in Edmonds (the Unocal site). While the EIS evaluated impacts at both alternative plant sites, this Technical Memorandum provides, as required by Snohomish County, additional analysis of concurrency issues associated with the Route 9 site.

B. LOCATION AND ACCESS

The Route 9 site, as shown in the Vicinity Map (Figure 1), is located in unincorporated Snohomish County east of SR-9, just north of the interchange of SR-9 and SR-522 and the City of Woodinville. It consists of parcels owned by various individuals, businesses, and organizations as shown in Table 1. The Route 9 site, shown in Figure 2, is 114.3 acres in area and roughly rectangular in shape. The northern portion of the site, which is outside the Maltby Urban Growth Area (UGA) boundary, is largely undeveloped and partially forested, with the presence of wetlands. The central and southern portions of the site are developed for commercial and industrial land uses. The primary street access to the site would be at the intersection of SR-9 and 228th Street SE.

¹ Pipeline development trips provided by Werdal (pers. comm., 2003). The information in the pipeline forecast report will be valid for 90 days following the date of the report.

TABLE 1
Existing Route 9 Site, Parcel Owners

Property Owner(s)	Tenant Information	Site Address
Bear Creek Grange	HMS Subtronics	22705 and 22729 SR-9 SE, Woodinville, WA 98072
Crane, Kenneth G.	Rushent Sales, Inc.	22815 SR-9 SE, Woodinville, WA 98072
Fitz Auto Parts Inc./Legacy	GreenLeaf Import Brand, d.b.a. Fitz Auto Parts	23323 SR-9 SE, Woodinville, WA 98072
D.L. and C.L. Fitzpatrick	GreenLeaf Acquisitions	23323 SR-9 SE, Woodinville, WA 98072
House, Clifton	CT Sales	P.O. Box 1570, Woodinville, WA 98072
Kennedy-Evergreen Holdings, LLC	Evergreen Utility Contractors, Inc.	22823 SR-9 SE, Woodinville, WA 98072
Cliff English	Active Excavator Rentals	22823 SR-9 SE, Woodinville, WA 98072
Cliff English	Best Auto Repair	22823 SR-9 SE, Woodinville, WA 98072
Lincoln Investments	Penick LLC	22909 SR-9 SE, Woodinville, WA 98072
Janet Lydig, Michael McFarland, and Philip Carstens	Lydig Construction	22811 SR-9 SE, Woodinville, WA 98072
Northshore School District 417	Site Not Occupied	Vacant
OPUS Northwest LLC	Quality Business Systems	22509 SR-9 SE, Woodinville, WA 98072
Rennebohm, Richard and Cheryl	Woody's Auto Yard	23005 SR-9 SE, Woodinville, WA 98072
Waterman Properties LP	Insurance Auto Auction	23219 SR-9 SE, Woodinville, WA 98072
Woodinville North General Partnership (Echelbarger Co.)	Property Vacant	22701 SR-9 SE, Woodinville, WA 98072
Woodinville North One LLC	StockPot Culinary Campus	22505 SR-9 SE, Woodinville, WA 98072

Source: Tenant data provided by Kathi Thompson (pers. comm., 2003).

The footprint for a 36-mgd treatment plant, with room for future expansion to 54 mgd, would occupy approximately 80.6 acres.² This would include process facilities, administrative and maintenance buildings, a community-oriented building, roads,

² The northern 37.3 acres of the Route 9 site are located outside the UGA; portions of the stormwater management system may be located in this area outside the UGA, but no buildings or plant process facilities would be located there.

stormwater detention and treatment ponds, and 22 acres of forest. Additional area would be used for buffers between treatment facilities and the property line.

Existing Conditions

The Route 9 site is located along SR-9 largely within the Maltby UGA, an unincorporated portion of south Snohomish County. The site is bordered by SR-9 to the west and SR-522 to the east. Transportation systems in the vicinity of the site include local and regional roadways and a Burlington Northern-Santa Fe railway line. Roadways in the vicinity of the Route 9 site range from residential neighborhood streets to major regional highways. The roadways evaluated with the Brightwater project are SR-9, SR-522, Woodinville-Snohomish Road, and 228th Street SE.

Both SR-9 and SR-522 are under the jurisdiction of WSDOT and intersections along them have a level-of-service (LOS) standard of D. Both Woodinville-Snohomish Road and 228th Street SE are under the jurisdiction of Snohomish County. Woodinville-Snohomish Road has an urban arterial standard of LOS E, and 228th Street SE has a rural arterial standard of LOS C pursuant to DPWR 4210 (II) (C).

SR-9 is a two-lane north/south roadway with a posted speed limit of 45 mph. It is classified by WSDOT as a rural, minor arterial near the treatment plant site. Annual average daily traffic (AADT) on SR-9 is 24,240 vehicles (combination of both directions) along the segment between 228th Street SE and SR-522. SR-9 is part of the Statewide Freight and Goods Transportation System.

SR-522 is a four-lane east/west divided highway with a posted speed of 55 mph. It is classified by WSDOT as an urban principal arterial. AADT for SR-522 is 39,000 vehicles just west of the SR-9 interchange. SR-522 provides a connection between SR-2 in east Snohomish County and I-5 in north Seattle. SR-522 is a part of the Statewide Freight and Goods Transportation System.

Woodinville-Snohomish Road extends from the starting point of SR-9, at the SR-522 interchange, to the south where it ends at the King County line. It is a two-lane north/south roadway with intermittent sidewalks, a stop-controlled intersection at 240th Street SE, and a posted speed limit of 35 mph. It is classified as an urban arterial by Snohomish County and provides a transportation connection to and from the City of Woodinville and SR-522. The AADT for Woodinville-Snohomish Road is 12,600 vehicles.

228th Street SE is a two-lane east/west roadway with intermittent sidewalks, a bike lane, and a posted speed limit of 35 mph. It is classified as a rural arterial by Snohomish County and provides a transportation connection to and from the City of Bothell and I-405. The AADT for 228th Street SE is 5,530 vehicles west of SR-9 and 18,700 vehicles just east of SR-527.

Future Conditions

Based on the opening year of the treatment plant (2010), the traffic conditions of SR-9, SR-522, and 228th Street SE were projected. The future year 2010 was selected because it is the forecast year of the proposed expiration date of the certificate of concurrency, pursuant to Section 30.66B.145 (2) (f) (SCUDC). This projection included traffic from

planned project improvements and new traffic from “pipeline” development projects³. Pipeline developments are future traffic data that are formally approved and permitted by Snohomish County (see discussion below).

Planned and Programmed Projects

Planned and programmed project data for SR-9, SR-522, Woodinville-Snohomish Road, and 228th Street SE were collected from Snohomish County’s Department of Public Works, pursuant to DPWR 4213 (VI)(D), and WSDOT to be included in the future operations analysis. These projects are necessary to determine the future conditions in which the forecasted volumes will be applied.

Snohomish County is planning improvements to Woodinville-Snohomish Road in 2005. The project will widen the roadway to three lanes from the King County line and match the WSDOT proposed five-lane section at the SR-522 interchange. The three-lane section will include one travel lane in each direction with a center two-way left-turn lane. Other improvements include a shoulder on the east side of the roadway; a planter strip, curb, and sidewalk on the west side; and water detention ponds. The status of this project’s funding has been uncertain, and Snohomish County had not accounted for its effects on the “arterial unit in arrears” list as of April 1, 2003. As a result, it was not included in the analysis. As of August 28, 2003, the project as described above is fully funded and is expected to be completed by November 2005 (Lee, pers. comm., 2003).

Another planned Snohomish County road improvement is a signalization project at the intersection of 228th Street SE and 45th Avenue SE. The project includes adding left-turn bays on 228th Street SE, sidewalk, and curb and gutter.

Capacity improvements by WSDOT are planned for SR-9 (from SR-522 to SR-524) to be completed by November 2006 and farther north (to 176th Street SE) to start construction by 2010. Improvements include a new signal at the intersection of SR-9 and SR-522 westbound ramps, a new through lane in each direction and a center two-way left-turn lane between SR-522 and 228th Street SE, as well as one additional through lane in each direction between 228th Street SE and SR-524 (Maltby Road). The status of this project’s funding has been uncertain, and Snohomish County had not accounted for its effects on the “arterial unit in arrears” list as of April 1, 2003. As a result, it was not included in the analysis. Currently, the project as described above is fully funded by the “Nickel Funding Package” as legislated by the State of Washington.

Pipeline Developments

Section 30.66B.145 (1) (SCUDC) states, “An inventory of developments that have been determined concurrent, also referred to as “developments in the pipeline,” will be used to estimate future traffic volumes for forecasting future level-of-service conditions. This inventory will be established and maintained by the department of public works in accordance with the department’s administrative rules. Developments in the pipeline will also include developments given pre-application concurrency approval pursuant to SCC 30.66B.175.” The inventory includes vehicle trips from each “pipeline development”

³ Pipeline development trips provided by Werdal (pers. comm., 2003).

with the trips distributed to the affected intersections. The official inventory of pipeline data was obtained on April 1, 2003 from Snohomish County Department of Public Works pursuant to DPWR 4213 (VI)(D).

With the development of the Brightwater plant on the Route 9 site, two developments from the inventory would be displaced. They include the Northshore School District Bus Barn and the Woodinville North Business Park, which King County proposes to include in the Brightwater project. The trips from these developments will be subtracted from the total pipeline trip inventory when the Brightwater system is evaluated.

C. TRIP GENERATION

Section 30.66B.130 (3) (SCUDC) states, “A development’s forecast trip generation at full occupancy shall be the basis for determining the impacts of the development on the road system. The department of public works will accept valid data from a traffic study prepared pursuant to this chapter or will use the latest edition of the ITE Trip Generation report published by the Institute of Transportation Engineers. Adjustments will be made for trip reduction credits approved under SCC 30.66B.640-.650.” The overall trip generation for this project is the sum of the new trips generated by treatment plant operation minus the existing trips that would be removed when the treatment plant is built. The following sections show the total trips for Brightwater at full capacity and the total number of trips that it is displacing, and that Brightwater will displace more trips than it creates.

Total Trips Projected for the Route 9 Site

The trips generated by the operation of the treatment plant were determined by the number of full-time employees (FTEs) and the number of biosolids/grit and chemical truck trips required to operate the 36 mgd plant in 2010, shown in Table 2. A total of 53 FTEs are expected to work two shifts, with a maximum of 39 FTEs during the day shift. Seven FTEs are expected to work at the onsite community-oriented building. The community-oriented building is expected to generate approximately 95 daily trips and 18 traffic trips during the peak hour. The peak-hour trip generation at the plant would be the same for both a.m. and p.m. peak traffic conditions, with peak traffic dominating in the inbound direction during the morning and outbound direction during the afternoon.

TABLE 2
Estimated Route 9 Site Treatment Plant-Generated Traffic Trips

Trip/Vehicle Type	36 mgd (2010)		
	Total Employees	Daily	PM Peak Hour
Employee Trips/Passenger Cars	53 FTEs	120	40
Biosolids/Grit Truck Trips		6	1
Chemical Truck Trips		4	1
Visitor Trips/Passenger Cars		10	2
Community-Oriented Building	7 FTEs	95	18
Total Treatment Plant-Generated Traffic		235	62

Note: Traffic trip represents one direction (inbound and outbound) of a round trip.

Existing Land Use Trip Credits

The existing businesses currently occupying the Route 9 site would be displaced by the proposed Brightwater Route 9 site development, resulting in net trip credits to the transportation network. Pursuant to DPWR 4213 (IV) (A) (1), credit for existing trips will be given to applications for new development if there is a structure on the site that is occupied or unoccupied. Two-hour driveway counts of businesses on the east side of SR-9, between SR-522 and 228th Street SE, were performed between 3:30 p.m. and 5:30 p.m. on Tuesday, February 18, 2003 by CH2M HILL. In addition, a count of the intersection of SR-9 and 228th Street SE was performed between 3:30 p.m. and 5:30 p.m. on Tuesday, February 11, 2003, by CH2M HILL. The westbound approach of the intersection of SR-9 and 228th Street SE is also a driveway for the existing businesses that would be displaced. The intersection count showed the p.m. peak hour of traffic to be from 4 to 5 p.m. The other driveway counts showed varying peak hours of traffic. The hour considered for all the driveways was from 4 to 5 p.m. in order to match the intersection count. The existing driveway traffic is shown in Table 3.

TABLE 3
Summary of Driveway Traffic at Route 9 Site

Existing Business Name(s)	PM Peak Hour (4-5)		
	Trips In	Trips Out	Total Trips
StockPot Culinary Campus, Quality Business Systems, and Bear Creek Grange Hall (<i>shared driveways at westbound approach of SR-9 and 228th Street SE</i>)	18	62	80
Active Excavators	1	17	18
Wild West Mustang Ranch	1	3	4
CT Sales	1	6	7
Woody's Auto Yard	6	8	14
Insurance Auto Auctions	12	15	27
Fitz Auto Parts	30	32	62
Total	69	143	212

Source: Counts performed by CH2M HILL on February 11 and 18, 2003.

Each driveway count recorded the direction that the vehicle entered or exited. Based on the recorded directional distribution and current intersection turning distribution, the existing site trips were removed from the surrounding intersections' turning movement volumes.

The a.m. peak-hour Route 9 site trip credits were estimated from the p.m. peak hour. Using existing turning movement counts to determine road segment traffic volumes on SR-9 between the SR-522 interchange and 228th Street SE, it was found that the a.m. peak-hour volumes were 90 percent of the total of the p.m. peak-hour volumes. The 0.90 factor was applied to the p.m. peak-hour trip credits and those trips were reversed in direction to create the a.m. peak-hour trip credits applied in the analysis.

The existing businesses trip generation numbers were also estimated using the ITE Trip Generation Manual (1997). Data on the existing businesses currently operating at the Route 9 site are shown in Table 1. Based on this information, an approximation was made of the peak hour and daily trips currently generated onsite by those businesses. Excluding the StockPot Culinary Campus, these approximations were 230 to 270 p.m. peak hour and 700 to 900 daily trips.

As may be concluded from Tables 2 and 3, the existing trips are almost three and a half times greater than the new trips generated. This would result in fewer trips on the transportation network with Brightwater than with the existing land uses. Therefore, it is concluded that the Brightwater plant, when fully operating, will have no negative traffic impact on the road system. Rather, the project should result in improved traffic operations for state and county roads in the area.

D. TRIP DISTRIBUTION AND ASSIGNMENT

The expected initial year of treatment plant operation is 2010. The distribution of operational trips varies based on trip type. There would be employee trips, biosolids/grit and chemical truck trips, and plant and community-oriented building visitor trips. The future network assumptions include only the Snohomish County signalization project of 45th Avenue SE and 228th Street SE. The proposed Route 9 plant site is located within Transportation Service Area (TSA) E.

Truck Access Routes

All truck trips would travel to and from the west on SR-522 via the interchange at SR-9 using the primary access at the existing westbound approach of the intersection of SR-9 and 228th Street SE.

Employee and Visitor Access Routes

Employee and visitor trip distribution was based on current population centers and existing traffic volumes. This revealed an emphasis on SR-9 south of 228th Street SE travelling to and from the west on SR-522. Figure 3 shows the distribution used for a.m. and p.m. peak hours and average weekday traffic (AWDT). Figures 4 and 5 illustrate the assignment of the project trips during the a.m. and p.m. peak hours, respectively.

Figures 3, 4, and 5 do not show trips distributed to each roadway in TSA E with three or more peak-hour Brightwater project trips. This is because the trips removed from the approaches leading to and coming from county arterial units not shown all have less than three net peak-hour trips. (Refer to Attachment A for a subtotal showing project trips minus existing trips.) Therefore, all intersections and arterial units outside the area shown in the figures would not have three or more peak-hour trips.

E. IDENTIFY CRITICAL ARTERIAL UNITS AND THEIR CRITICAL MOVEMENTS

The Brightwater plant would be built in TSA E, which has arterial units currently in arrears and an arterial unit designated ultimate capacity. Section 30.66B.160 (1) (SCUDC) states, "If a residential development which generates seven or more peak-hour

trips, or a nonresidential development which generates five or more peak-hour trips is proposed within a transportation service area which contains one or more arterial units in arrears and/or designated ultimate capacity arterial units, then the development may only be determined to be concurrent based on a trip distribution to determine the impacts of the development. The director of public works shall not determine concurrent any development generating more than 50 peak-hour trips which would likely impact an arterial unit in arrears or likely cause any arterial unit to fall into arrears, except when the developer proposes to remedy any arterial unit in arrears in accordance with SCC 30.66B.167.”

Table 4 lists the arterial to be considered for concurrency related to the Route 9 site. Only 228th Street SE, classified as a rural arterial, is listed as a critical arterial unit as stated by Snohomish County. According to DPWR 4210 (V)(A), an arterial is considered to be in arrears if it currently exceeds or is forecast within 6 years to exceed the adopted LOS standard for rural arterials, which is LOS C.

Woodinville-Snohomish Road has been designated ultimate capacity. According to Section 30.66B.110 (1) (SCUDC), the designation of ultimate capacity is determined by motion of the Snohomish County Council. This motion states that maintaining adopted LOS standards on an arterial unit would require an unwarranted, excessive expenditure of public funds. This arterial unit was not included in the arterial analysis based on Conducting Future Level-of-Service Analysis (Snohomish County, 2002a). It specified analysis only be performed for critical arterial units in arrears, not those roadways that are designated ultimate capacity.

TABLE 4
Critical Arterial Units

Unit No.	Name of Arterial (Rural/Urban)	Limits (from/to)	Category	Minimum LOS
272	228th Street SE (Rural)	45th Avenue SE/SR-9	2	C

Source: As identified in Critical Arterial Units (Snohomish County, 2002b).

Table 5 lists the critical arterial movements as stated by Snohomish County. For 228th Street SE, only the eastbound direction is a critical movement.

TABLE 5
Critical Arterial Unit Movements

Unit No.	Arterial Unit Description	Critical Movements	
		Peak Hour	Direction
272	228th Street SE between 45th Avenue SE and SR-9	AM	Eastbound
		PM	Eastbound

Source: As identified in Critical Arterial Units (Snohomish County, 2002b).

F. LEVEL-OF-SERVICE ANALYSIS

Snohomish County critical arterial units and WSDOT-controlled intersections were analyzed for existing and year 2010 conditions with and without the Brightwater project. The future year 2010 was selected because it is the forecast year of the proposed expiration date of the certificate of concurrency, pursuant to Section 30.66B.145 (2) (f) (SCUDC).

Existing Travel Time Calibration

Before conducting the future level-of-service analysis, an attempt was made to calibrate the existing a.m. and p.m. Synchro traffic models with the field measured travel time data provided by Snohomish County in Attachment C of DPW Procedure 4210. The travel time measurements were taken in the field in June 2001 and included both a.m. and p.m. travel times for 228th Street SE, between 45th Avenue SE and SR-9. The p.m. travel time study showed an average travel speed of 19.6 mph and the a.m. travel time study showed an average travel speed of 19.3 mph.

Using the more recent traffic data collected by CH2M HILL (February 2003), the existing p.m. traffic model showed a computed average travel speed of 34.6 mph. And using the data provided by Snohomish County (April 2002), the existing a.m. traffic model showed a computed average travel speed of 33.0 mph. After discovering the discrepancy between the Synchro model and the field measured arterial travel speeds, CH2M HILL contacted and worked with Snohomish County to devise a calibration method that would yield both comparable average travel speeds and a reasonable overall intersection LOS at the intersection of SR-9 and 228th Street SE. While working together, both Snohomish County and CH2M HILL found a way to modify the saturation flow rate for the eastbound through/right lane at the intersection of SR-9 and 228th Street SE that would produce average travel speeds identical to the travel time studies. After completing this modification, the p.m. peak-hour model showed a computed average travel speed of 19.6 mph and the a.m. peak-hour model showed 19.3 mph. In addition, the Synchro model yielded reasonable intersection levels-of-service.

After completing the calibration, the CH2M HILL traffic models were carried forward to complete the future level-of-service analysis.

Critical Arterial Unit Movements

Table 6 shows the key intersections for the critical arterial unit movements as stated by Snohomish County.

TABLE 6
Key Intersections for Critical Arterial Unit Movements

Unit No.	Key Intersection No.	Major Leg	Minor Leg
272	202	228th Street SE	45th Avenue SE
	203	SR-9	228th Street SE

Source: As identified in Key Intersections (Snohomish County, 2003).

Current a.m. and p.m. intersection counts and pipeline inventory reports for both key intersections on 228th Street SE were collected from Snohomish County (Werdal, pers. comm., 2003). The intersection counts included turning movement volumes, heavy vehicle volumes, and peak-hour factors. In addition, a count of the intersection of SR-9 and 228th Street SE was performed between 3:30 p.m. and 5:30 p.m. on Tuesday, February 11, 2003, by CH2M HILL. Using these counts, the pipeline inventory reports, and the estimated project trips, traffic volumes for the following conditions were computed.

- Existing (Year 2003)
- Future (Year 2010) Traffic Volumes without Brightwater
- Future (Year 2010) Traffic Volumes with Brightwater

These intersection volumes are presented in tabular form in Attachment A.

The computed intersection volumes, heavy vehicle percentages, and peak-hour factors were entered into a Synchro, Version 5.0 (Build 323), traffic model to determine intersection operations and arterial LOS. Using the traffic model, future travel speeds were estimated for the two future year conditions.

In both analyses, the planned signalization of the intersection at 228th Street SE and 45th Avenue SE was included. Pursuant to DPWR 4213 (VI) (D), this project was included in the future operations analysis because it is necessary to determine the future conditions in which the forecasted volumes will be applied. A four-phase signal with permitted left turns and optimized timing was assumed. Synchro arterial LOS reports for both conditions are in Attachment B.

The results of the a.m. and p.m. peak hour analyses for future traffic volumes without Brightwater are summarized in Table 7.

TABLE 7
Arterial Analysis Summary for Future Traffic Volumes (Year 2010) without Brightwater

Unit No.	Peak Hour	Direction	Category	LOS Standard	Minimum Speed Standard (mph)	Estimated Travel Speed (mph)	Meet Speed Standard?	Estimated Level of Service
272	AM	Eastbound	2	LOS C	25.0	10.2	No	F
	PM	Eastbound	2	LOS C	25.0	9.8	No	F

Both a.m. and p.m. peak-hour results show the arterial unit not meeting the speed standard of 25.0 mph for a Category 2 roadway at LOS C and operate at LOS F.

The results of the a.m. and p.m. peak hour analyses for future traffic volumes with Brightwater are summarized in Table 8.

TABLE 8

Arterial Analysis Summary for Future Traffic Volumes (Year 2010) with Brightwater

Unit No.	Peak Hour	Direction	Category	LOS Standard	Minimum Speed Standard (mph)	Estimated Travel Speed (mph)	Meet Speed Standard?	Estimated Level of Service
272	AM	Eastbound	2	LOS C	25.0	13.1	No	F
	PM	Eastbound	2	LOS C	25.0	16.8	No	F

Tables 7 and 8 show both the a.m. and p.m. peak-hour results do not meet the speed standard of 25.0 mph for a Category 2 roadway at LOS C and operate at LOS F. They also show the estimated travel speed in the future without Brightwater is lower than in the future with Brightwater. The reason is Brightwater is removing more trips from the transportation system than it is creating, thus allowing the project condition to operate at higher speeds.

WSDOT Intersections

Four intersections that are under WSDOT jurisdiction along SR-9 from the SR-522 interchange to SR-524 (Figure 3) were analyzed with Synchro, Version 5.0 (Build 323) pursuant to DPWR 4210 (IV)(D) for the existing and two future year conditions. These WSDOT-controlled intersections were chosen for analysis pursuant to DPWR 4210 (IV) (G).

In addition, the intersection of 228th Street SE and 45th Avenue SE was analyzed for Snohomish County. In both future year analyses the planned signalization of the intersection at 228th Street SE and 45th Avenue SE was included. Pursuant to DPWR 4213 (VI) (D), this project was included in the future operations analysis because it is necessary to determine the future conditions in which the forecasted volumes will be applied. A four-phase signal with permitted left turns and optimized timing was assumed. The a.m. and p.m. peak hour intersection volumes for the conditions analyzed are in Attachment A. Synchro intersection reports for both conditions are in Attachment C.

Table 9 shows that the intersections in the future without Brightwater operate worse than the intersections in the future with Brightwater. The reason is the Brightwater project is removing more trips from the transportation system than it is creating, allowing improved operations.

TABLE 9
Intersection Analysis Summary for AM and PM Peak Hours

Intersection (Jurisdiction)	Peak Hour	Existing (2003) Volumes		2010 Volumes without Brightwater		2010 Volumes with Brightwater	
		LOS	Delay	LOS	Delay	LOS	Delay
SR-9 and SR-522 Eastbound Ramps (WSDOT)	AM	C	21.2	C	26.7	C	24.8
	PM	D	37.9	D	37.6	D	35.1
SR-9 and SR-522 Westbound Ramps (WSDOT)	AM	<u>D</u>	<u>27.3</u>	<u>F</u>	<u>110.1</u>	<u>D</u>	<u>34.3</u>
	PM	<u>D</u>	<u>28.2</u>	<u>F</u>	<u>>1000</u>	<u>F</u>	<u>139.0</u>
SR-9 and 228th Street SE (WSDOT)	AM	D	39.5	F	90.8	E	66.2
	PM	C	27.3	F	95.4	C	31.2
SR-9 and SR-524 (WSDOT)	AM	F	101.7	F	130.6	F	114.2
	PM	E	60.2	E	79.0	E	67.7
228th Street SE and 45th Avenue SE (Snohomish County)	AM	<u>F</u>	<u>57.1</u>	A	7.5	A	6.9
	PM	<u>F</u>	<u>255.1</u>	A	8.7	A	8.4

1. Underlined text indicates an unsignalized intersection. The highest stop-controlled approach LOS and Delay is reported.

2. Delay is in units of seconds per vehicle.

3. Intersections operating at LOS E/F are in **bold** type.

IMPACT FEE AND MITIGATION REQUIREMENTS

Section 30.66B.310 (4) (SCUDC) states, “Developments which are determined to cause a greater reduction in ADT on the road system than the number of new ADT generated by the development, by promoting the use of transit or other means, will be determined to generate no new ADT for the purpose of determining the developments road system impact fee.” Since the Brightwater treatment plant would cause a greater reduction in ADT than the number of new ADT generated, no impact fee is required of the Brightwater project under the Snohomish County road system impact fee guidelines.

The results of the critical arterial unit and intersection operations analyses show the Brightwater 36-mgd treatment plant operations cause no impacts because development of the plant at the Route 9 site would displace existing land uses that currently generate more trips than the proposed project. As such, no mitigation is required of the Brightwater project under the Snohomish County concurrency guidelines. Also, Brightwater project traffic using Snohomish County and WSDOT intersections are estimated to cause no impacts greater than the future volumes without Brightwater condition.

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ATTACHMENTS

- A – AM and PM Peak-Hour Future Traffic Volumes in Tabular Form
- B – Synchro Arterial LOS Reports
- C – Synchro Intersection Reports
- D – Documents Required by Snohomish County

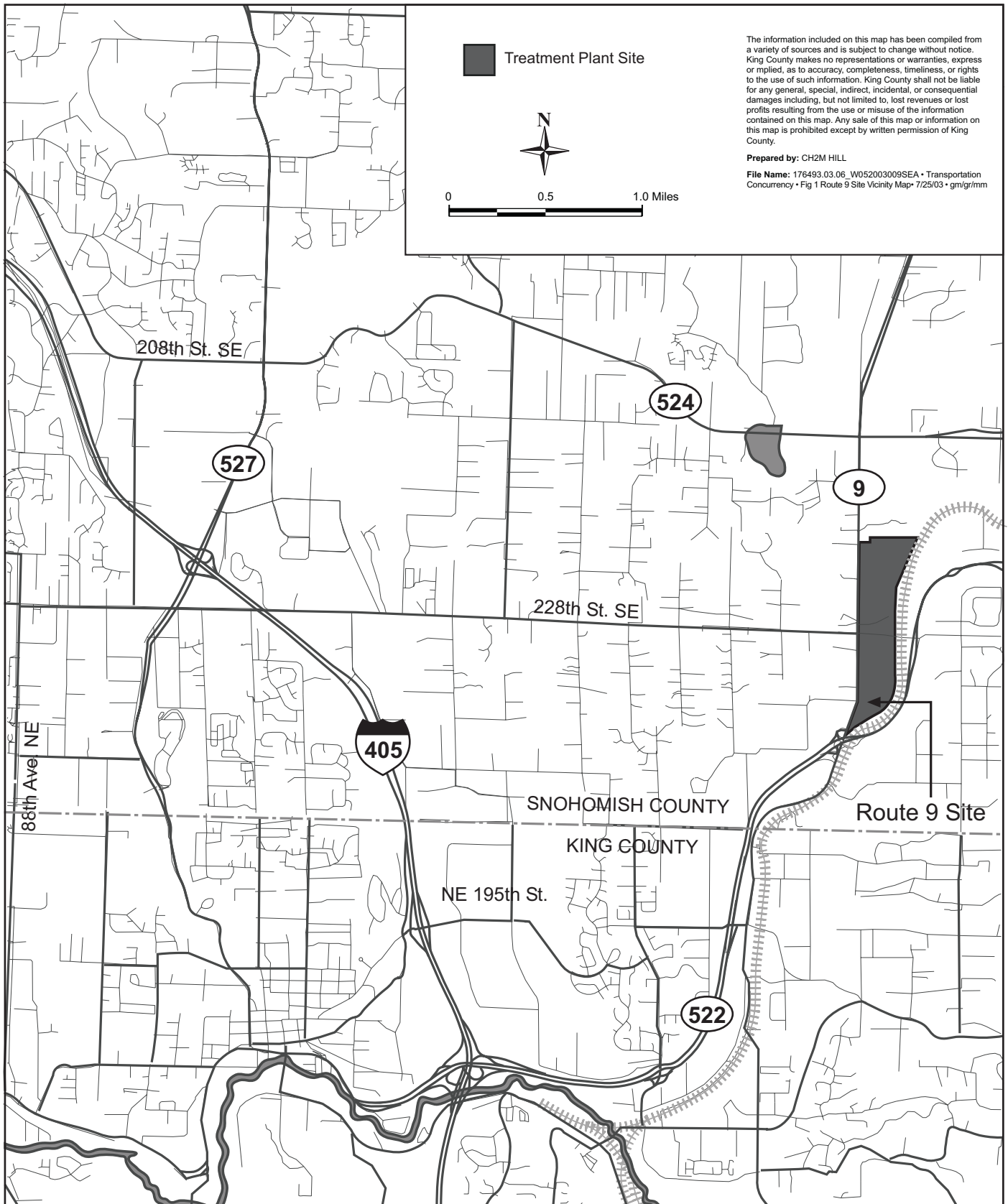


Figure 1

Route 9 Site – Vicinity Map

BRIGHTWATER REGIONAL WASTEWATER TREATMENT SYSTEM

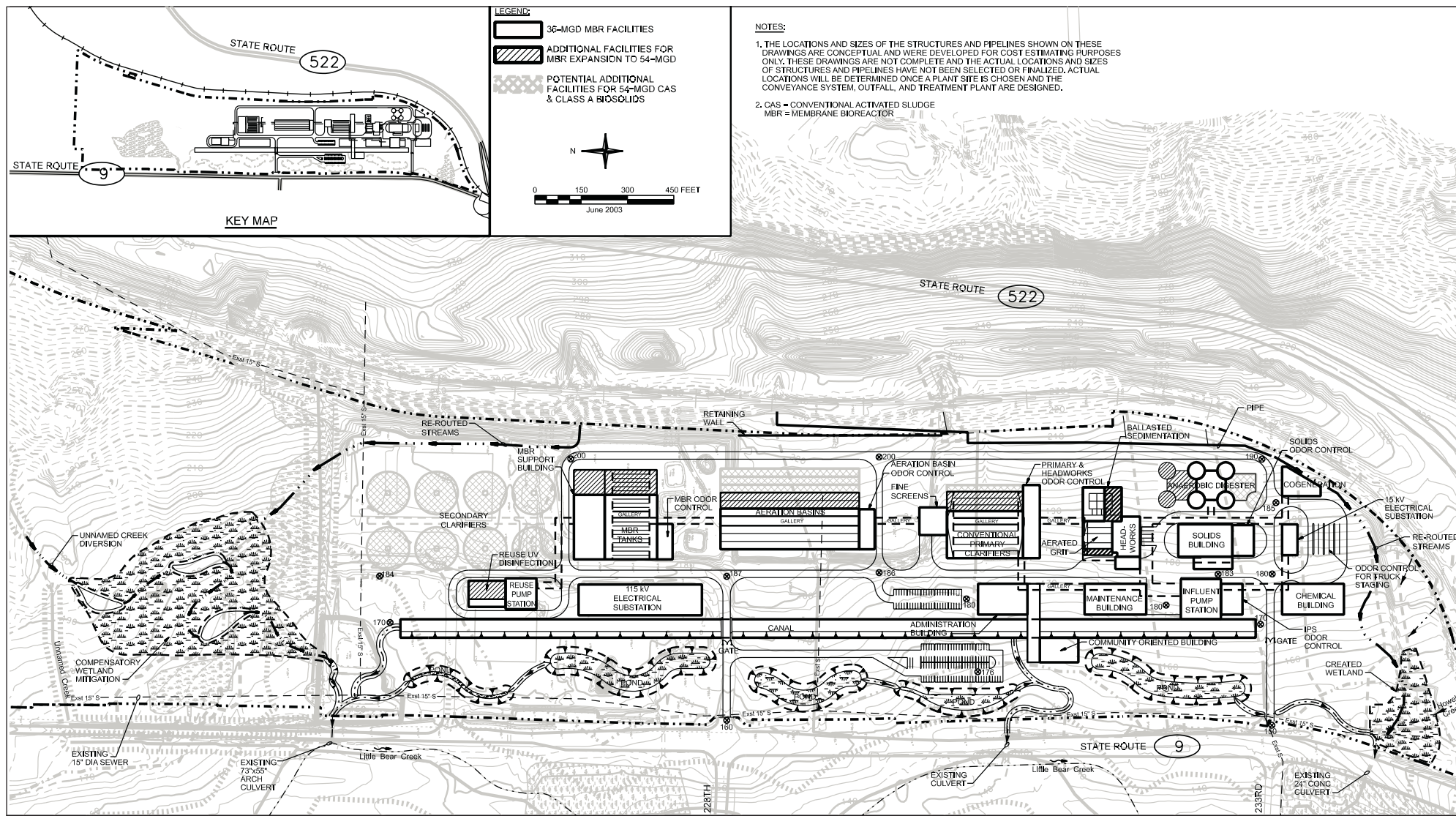
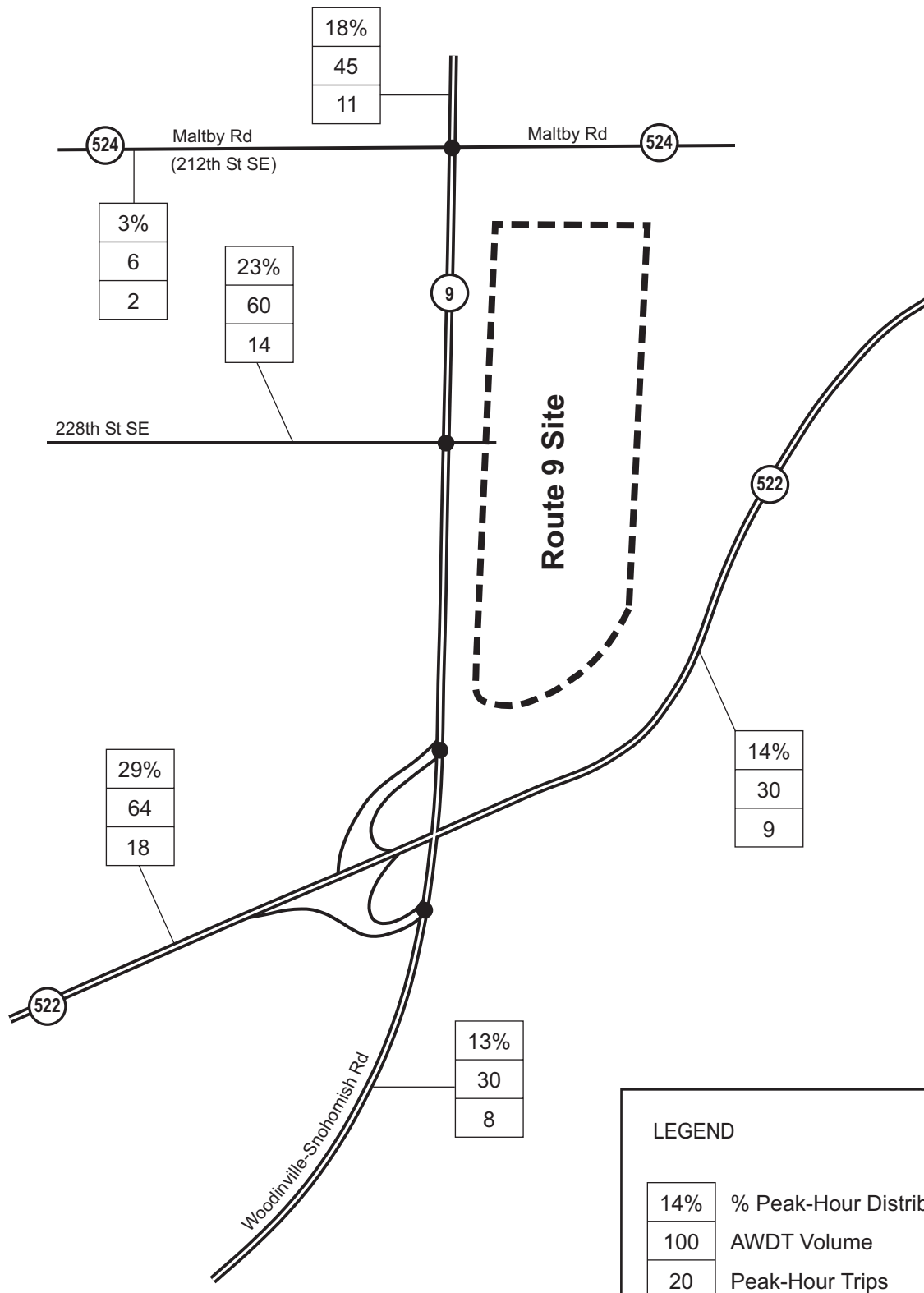


Figure 2
Route 9 Site – 36- and 54-mgd Plant



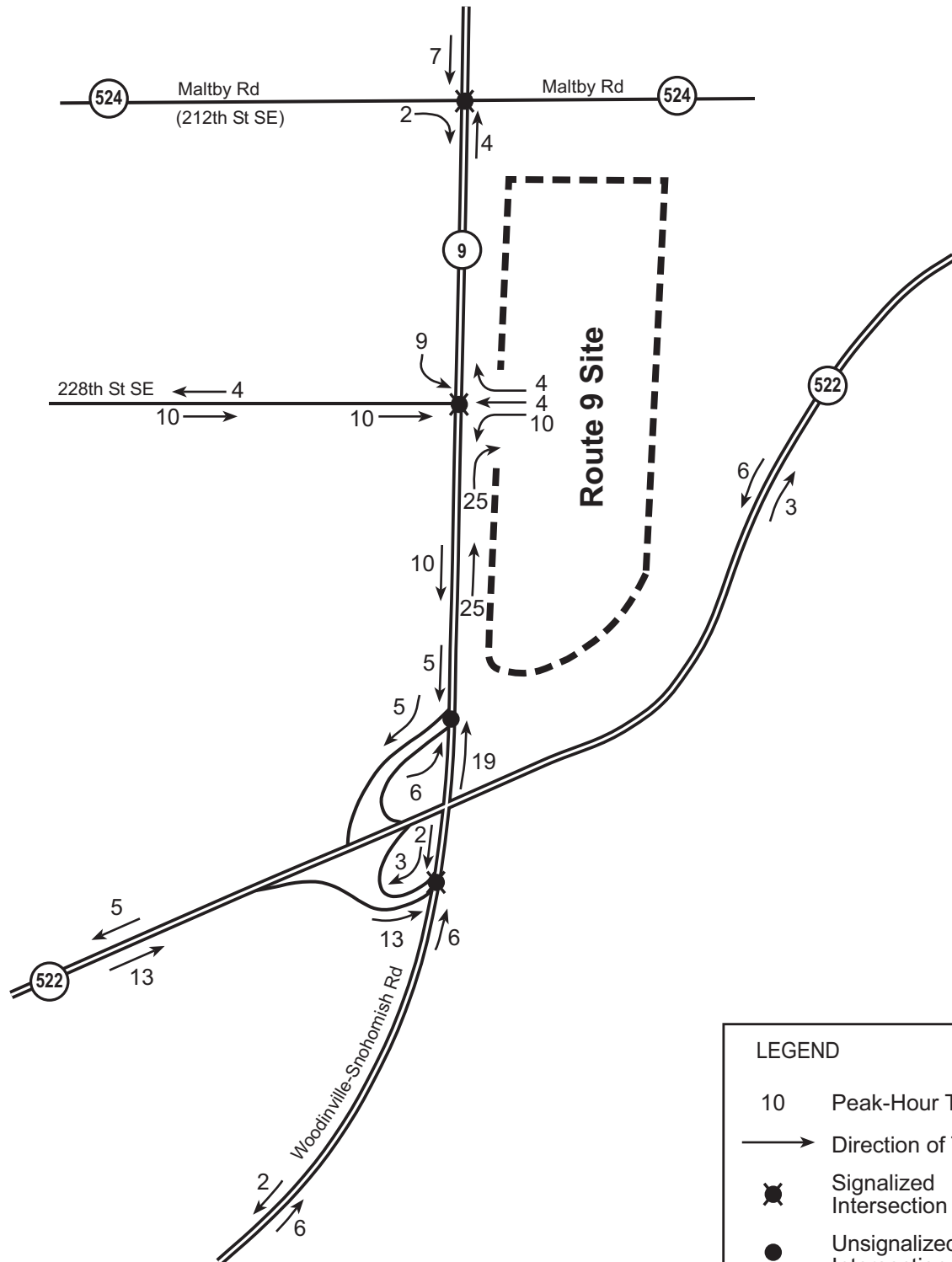
King County
Department of
Natural Resources and Parks
**Wastewater Treatment
Division**

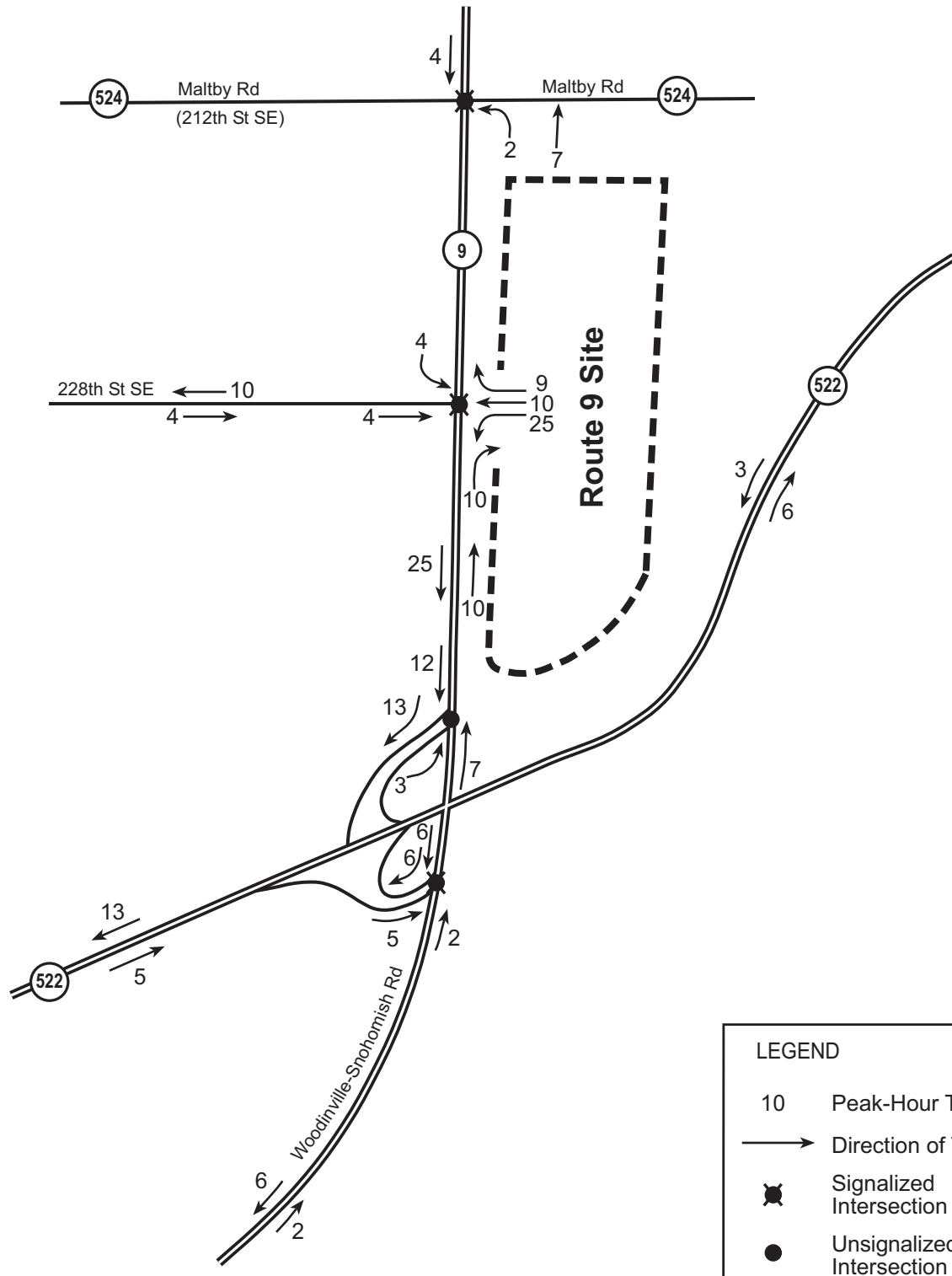
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File Name: 176493.03.06_W052003009SEA-Transportation Concurrence •
Fig 3 Est 2010 Peak Hr ProjTripDistribution • 9/09/03 • lw/mm



BRIGHTWATER REGIONAL WASTEWATER TREATMENT SYSTEM

Figure 3
**Estimated 2010 Peak-Hour
Project Trip Distribution**





LEGEND

- 10 Peak-Hour Traffic
- Direction of Travel
- ★ Signalized Intersection
- Unsignalized Intersection



King County
Department of
Natural Resources and Parks
**Wastewater Treatment
Division**

Prepared by: CH2M HILL
File Name: 176493.03.06_W052003009SEA_Transportation Concurrency •
Fig 5 Est 2010 PM Peak ProjTripDistribution • 9/09/03 • lw/mm



Figure 5

Estimated 2010 PM Peak Project Trip Assignment

BRIGHTWATER REGIONAL WASTEWATER TREATMENT SYSTEM

Attachment A

Future 2010 AM Peak Hour Traffic Volumes for Intersection #192, SR-9 & SR-522 EB Ramps

Intersection ID #192	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Count, 06/19/2002	229	0	55	0	0	0	33	283	0	0	710	24
Pipeline Development Trips	11	0	30	0	0	0	4	218	0	0	107	65
Subtotal (Trips without Project)	240	0	85	0	0	0	37	501	0	0	817	89
Pipeline Trips Removed												
Northshore SD Bus Barn	3	0	0	0	0	0	0	34	0	0	14	17
Woodinville North BP	4	0	0	0	0	0	0	158	0	0	3	26
Existing Site Trips Removed												
Active Excavators, Wild West Mustang Ranch, CT Sales, Woody's Auto Parts, Insurance Auto Auctions, Fitz Auto	13	0	0	0	0	0	0	17	0	0	15	1
StockPot Soup, Quality Business Systems, Bear Creek Grange Hall	7	0	0	0	0	0	0	9	0	0	2	0
Project Trips	13	0	0	0	0	0	0	6	0	0	2	3
Subtotal (Project Trips minus Existing Trips)	-7	0	0	0	0	0	0	-20	0	0	-15	2
Subtotal (Total Trips Added)	-14	0	0	0	0	0	0	-212	0	0	-32	-41
Total Forecast with Project	226	0	85	0	0	0	37	289	0	0	785	48

Future 2010 AM Peak Hour Traffic Volumes for Intersection #XXX, SR-9 & SR-522 WB Ramps

Intersection ID #XXX	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Count, No Count-Estimated	50	0	136	0	0	0	83	429	0	0	586	810
Pipeline Development Trips	0	0	0	0	0	0	0	229	0	0	172	28
Subtotal (Trips without Project)	50	0	136	0	0	0	83	658	0	0	758	838
Pipeline Trips Removed												
Northshore SD Bus Barn	0	0	0	0	0	0	0	37	0	0	31	0
Woodinville North BP	0	0	0	0	0	0	0	162	0	0	29	0
Existing Site Trips Removed												
Active Excavators, Wild West Mustang Ranch, CT Sales, Woody's Auto Parts, Insurance Auto Auctions, Fitz Auto	3	0	0	0	0	0	0	30	0	0	16	23
StockPot Soup, Quality Business Systems, Bear Creek Grange Hall	2	0	0	0	0	0	0	16	0	0	2	3
Project Trips	6	0	0	0	0	0	0	19	0	0	5	5
Subtotal (Project Trips minus Existing Trips)	1	0	0	0	0	0	0	-27	0	0	-13	-21
Subtotal (Total Trips Added)	1	0	0	0	0	0	0	-226	0	0	-73	-21
Total Forecast with Project	51	0	136	0	0	0	83	432	0	0	685	817

Future 2010 AM Peak Hour Traffic Volumes for Intersection #XXX, SR-9 & SR-524 (Maltby Road)

Intersection ID #XXX	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Count, 04/09/2002	33	134	162	82	119	24	32	176	37	6	869	48
Pipeline Development Trips	0	0	29	14	0	0	18	33	21	1	123	7
Subtotal (Trips without Project)	33	134	191	96	119	24	50	209	58	7	992	55
Pipeline Trips Removed												
Northshore SD Bus Barn	0	0	12	6	0	0	2	5	2	0	6	0
Woodinville North BP	0	0	11	6	0	0	18	2	20	0	9	1
Existing Site Trips Removed												
Active Excavators, Wild West Mustang Ranch, CT Sales, Woody's Auto Parts, Insurance Auto Auctions, Fitz Auto	0	0	5	2	0	0	1	3	1	0	26	0
StockPot Soup, Quality Business Systems, Bear Creek Grange Hall	0	0	1	1	0	0	0	2	0	0	6	0
Project Trips	0	0	2	0	0	0	0	4	0	0	7	0
Subtotal (Project Trips minus Existing Trips)	0	0	-4	-3	0	0	-1	-1	-1	0	-25	0
Subtotal (Total Trips Added)	0	0	-27	-15	0	0	-21	-8	-23	0	-40	-1
Total Forecast with Project	33	134	164	81	119	24	29	201	35	7	952	54

Future 2010 AM Peak Hour Traffic Volumes for Intersection #203, SR-9 & 228th Street SE

Intersection ID #203	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Count, 04/04/2002	56	4	252	5	1	1	92	311	18	8	1109	117
Pipeline Development Trips	0	42	32	60	21	0	8	72	150	50	108	8
Subtotal (Trips without Project)	56	46	284	65	22	1	100	383	168	58	1217	125
Pipeline Trips Removed												
Northshore SD Bus Barn	0	21	0	31	17	0	0	9	28	24	0	0
Woodinville North BP	0	0	0	29	4	0	0	40	122	26	0	0
Existing Site Trips Removed												
Active Excavators, Wild West Mustang Ranch, CT Sales, Woody's Auto Parts, Insurance Auto Auctions, Fitz Auto	0	0	7	0	0	0	2	5	0	0	33	0
StockPot Soup, Quality Business Systems, Bear Creek Grange Hall	0	4	0	5	1	1	0	0	18	8	0	0
Project Trips	0	10	0	10	4	4	0	0	25	9	0	0
Subtotal (Project Trips minus Existing Trips)	0	6	-7	5	3	3	-2	-5	7	1	-33	0
Subtotal (Total Trips Added)	0	-15	-7	-55	-18	3	-2	-54	-143	-49	-33	0
Total Forecast with Project	56	31	277	10	4	4	98	329	25	9	1184	125

Future 2010 AM Peak Hour Traffic Volumes for Intersection #202, 228th Street SE & 45th Avenue SE

Intersection ID #202	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Count, 07/25/2001	3	325	274	43	210	4	18	12	14	33	117	32
Pipeline Development Trips	1	66	6	4	29	5	2	1	4	9	4	5
Subtotal (Trips without Project)	4	391	280	47	239	9	20	13	18	42	121	37
Pipeline Trips Removed												
Northshore SD Bus Barn	0	18	0	2	14	1	0	0	2	1	0	0
Woodinville North BP	0	18	0	1	3	0	0	0	1	2	0	0
Existing Site Trips Removed												
Active Excavators, Wild West Mustang Ranch, CT Sales, Woody's Auto Parts, Insurance Auto Auctions, Fitz Auto	0	6	0	0	2	0	0	0	0	1	0	0
StockPot Soup, Quality Business Systems, Bear Creek Grange Hall	0	4	0	0	1	0	0	0	0	0	0	0
Project Trips	0	10	0	0	4	0	0	0	0	0	0	0
Subtotal (Project Trips minus Existing Trips)	0	0	0	0	1	0	0	0	0	-1	0	0
Subtotal (Total Trips Added)	0	-36	0	-3	-16	-1	0	0	-3	-4	0	0
Total Forecast with Project	4	355	280	44	223	8	20	13	15	38	121	37

Future 2010 PM Peak Hour Traffic Volumes for Intersection #192, SR-9 & SR-522 EB Ramps

Intersection ID #192	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Count, 06/19/2002	573	0	59	0	0	0	154	568	0	0	447	56
Pipeline Development Trips	13	0	8	0	0	0	18	212	0	0	72	197
Subtotal (Total without Project)	586	0	67	0	0	0	172	780	0	0	519	253
Pipeline Trips Removed												
Northshore SD Bus Barn	3	0	0	0	0	0	0	36	0	0	21	28
Woodinville North BP	0	0	0	0	0	0	0	52	0	0	16	161
Existing Site Trips Removed												
Active Excavators, Wild West Mustang Ranch, CT Sales, Woody's Auto Parts, Insurance Auto Auctions, Fitz Auto	21	0	0	0	0	0	0	21	0	0	17	2
StockPot Soup, Quality Business Systems, Bear Creek Grange Hall	4	0	0	0	0	0	0	5	0	0	13	2
Project Trips	5	0	0	0	0	0	0	2	0	0	6	6
Subtotal (Project Trips minus Existing Trips)	-20	0	0	0	0	0	0	-24	0	0	-24	2
Subtotal (Total Trips Added)	-23	0	0	0	0	0	0	-112	0	0	-61	-187
Total Forecast with Project	563	0	67	0	0	0	172	668	0	0	458	66

Future 2010 PM Peak Hour Traffic Volumes for Intersection #XXX, SR-9 & SR-522 WB Ramps

Intersection ID #XXX	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Count, 02/11/2002	16	0	66	0	0	0	32	1047	0	0	392	357
Pipeline Development Trips	20	0	0	0	0	0	0	225	0	0	269	19
Subtotal (Total without Project)	36	0	66	0	0	0	32	1272	0	0	661	376
Pipeline Trips Removed												
Northshore SD Bus Barn	0	0	0	0	0	0	0	39	0	0	49	0
Woodinville North BP	0	0	0	0	0	0	0	52	0	0	177	0
Existing Site Trips Removed												
Active Excavators, Wild West Mustang Ranch, CT Sales, Woody's Auto Parts, Insurance Auto Auctions, Fitz Auto	1	0	0	0	0	0	0	42	0	0	19	18
StockPot Soup, Quality Business Systems, Bear Creek Grange Hall	0	0	0	0	0	0	0	9	0	0	15	13
Project Trips	3	0	0	0	0	0	0	7	0	0	12	13
Subtotal (Project Trips minus Existing Trips)	2	0	0	0	0	0	0	-44	0	0	-22	-18
Subtotal (Total Trips Added)	2	0	0	0	0	0	0	-135	0	0	-248	-18
Total Forecast with Project	38	0	66	0	0	0	32	1137	0	0	413	358

Future 2010 PM Peak Hour Traffic Volumes for Intersection #XXX, SR-9 & SR-524 (Maltby Road)

Intersection ID #XXX	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Count, 03/18/2002	76	143	43	36	183	28	137	854	66	16	337	31
Pipeline Development Trips	20	0	15	13	0	7	20	123	9	3	58	5
Subtotal (Total without Project)	96	143	58	49	183	35	157	977	75	19	395	36
Pipeline Trips Removed												
Northshore SD Bus Barn	0	0	10	9	0	0	2	7	1	0	6	0
Woodinville North BP	1	0	3	3	0	0	2	11	0	0	3	0
Existing Site Trips Removed												
Active Excavators, Wild West Mustang Ranch, CT Sales, Woody's Auto Parts, Insurance Auto Auctions, Fitz Auto	0	0	1	1	0	0	5	32	2	0	4	0
StockPot Soup, Quality Business Systems, Bear Creek Grange Hall	0	0	0	0	0	0	2	11	1	0	2	0
Project Trips	0	0	0	0	0	0	2	7	0	0	4	0
Subtotal (Project Trips minus Existing Trips)	0	0	-1	-1	0	0	-5	-36	-3	0	-2	0
Subtotal (Total Trips Added)	-1	0	-14	-13	0	0	-9	-54	-4	0	-11	0
Total Forecast with Project	95	143	44	36	183	35	148	923	71	19	384	36

Future 2010 PM Peak Hour Traffic Volumes for Intersection #203, SR-9 & 228th Street SE

Intersection ID #203	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Count, 02/11/2003	132	6	130	28	20	3	115	914	9	2	430	70
Pipeline Development Trips	13	29	16	226	50	0	37	139	69	34	46	6
Subtotal (Total without Project)	145	35	146	254	70	3	152	1053	78	36	476	76
Pipeline Trips Removed												
Northshore SD Bus Barn	0	22	0	49	27	0	0	10	29	25	0	0
Woodinville North BP	0	7	0	177	23	0	0	13	40	9	0	0
Existing Site Trips Removed												
Active Excavators, Wild West Mustang Ranch, CT Sales, Woody's Auto Parts, Insurance Auto Auctions, Fitz Auto	0	0	2	0	0	0	5	39	0	0	6	0
StockPot Soup, Quality Business Systems, Bear Creek Grange Hall	0	6	0	28	20	3	0	1	9	2	0	0
Project Trips	0	4	0	25	10	9	0	0	10	4	0	0
Subtotal (Project Trips minus Existing Trips)	0	-2	-2	-3	-10	6	-5	-40	1	2	-6	0
Subtotal (Total Trips Added)	0	-31	-2	-229	-60	6	-5	-63	-68	-32	-6	0
Total Forecast with Project	145	4	144	25	10	9	147	990	10	4	470	76

Future 2010 PM Peak Hour Traffic Volumes for Intersection #202, 228th Street SE & 45th Avenue SE

Intersection ID #202	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Existing Count, 11/13/2002	51	295	55	17	389	56	124	120	36	18	24	24
Pipeline Development Trips	6	48	4	5	76	9	8	5	2	5	3	4
Subtotal (Total without Project)	57	343	59	22	465	65	132	125	38	23	27	28
Pipeline Trips Removed												
Northshore SD Bus Barn	0	21	0	0	26	1	0	0	0	1	0	0
Woodinville North BP	0	6	0	4	19	0	0	0	1	0	0	0
Existing Site Trips Removed												
Active Excavators, Wild West Mustang Ranch, CT Sales, Woody's Auto Parts, Insurance Auto Auctions, Fitz Auto	0	2	0	0	4	1	0	0	0	0	0	0
StockPot Soup, Quality Business Systems, Bear Creek Grange Hall	0	5	0	1	17	2	0	0	1	0	0	0
Project Trips	0	4	0	0	10	0	0	0	0	0	0	0
Subtotal (Project Trips minus Existing Trips)	0	-3	0	-1	-11	-3	0	0	-1	0	0	0
Subtotal (Total Trips Added)	0	-30	0	-5	-56	-4	0	0	-2	-1	0	0
Total Forecast with Project	57	313	59	17	409	61	132	125	36	22	27	28

Attachment B

Arterial Level of Service: EB 228th ST SE - 45 to SR9

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR9	II	37	135.3	126.1	261.4	1.4	19.3	D
Total	II		135.3	126.1	261.4	1.4	19.3	D

Arterial Level of Service: EB 228th ST SE - 45 to SR9

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR9	II	38	134.3	123.4	257.7	1.4	19.6	D
Total	II		134.3	123.4	257.7	1.4	19.6	D

Arterial Level of Service: EB 228th ST SE - 45 to SR9

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR9	II	37	135.3	360.0	495.3	1.4	10.2	F
Total	II		135.3	360.0	495.3	1.4	10.2	F

Arterial Level of Service: WB 228th ST SE - 45 to SR9

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
45th Ave SE	III	35	143.9	5.2	149.1	1.4	33.8	A
Total	III		143.9	5.2	149.1	1.4	33.8	A

Arterial Level of Service: EB 228th ST SE - 45 to SR9

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR9	II	38	134.3	378.0	512.3	1.4	9.8	F
Total	II		134.3	378.0	512.3	1.4	9.8	F

Arterial Level of Service: WB 228th ST SE - 45 to SR9

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
45th Ave SE	III	35	143.9	8.7	152.6	1.4	33.0	A
Total	III		143.9	8.7	152.6	1.4	33.0	A

Arterial Level of Service: EB 228th ST SE - 45 to SR9

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR9	II	37	135.3	248.9	384.2	1.4	13.1	E
Total	II		135.3	248.9	384.2	1.4	13.1	E

Arterial Level of Service: WB 228th ST SE - 45 to SR9

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
45th Ave SE	III	35	143.9	5.0	148.9	1.4	33.8	A
Total	III		143.9	5.0	148.9	1.4	33.8	A

Arterial Level of Service: EB 228th ST SE - 45 to SR9

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SR9	II	38	134.3	165.9	300.2	1.4	16.8	E
Total	II		134.3	165.9	300.2	1.4	16.8	E

Arterial Level of Service: WB 228th ST SE - 45 to SR9

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
45th Ave SE	III	35	143.9	8.3	152.2	1.4	33.1	A
Total	III		143.9	8.3	152.2	1.4	33.1	A

Attachment C

HCM Unsignalized Intersection Capacity Analysis
30: SR522 WB Ramps & SR9













Existing Volumes
AM Peak Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↑	↑	↱
Sign Control	Stop			Free	Free	
Grade	-3%			-5%	5%	
Volume (veh/h)	50	136	83	429	586	810
Peak Hour Factor	0.89	0.89	0.88	0.88	0.93	0.93
Hourly flow rate (veh/h)	57	154	95	492	636	880
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)				500		
pX, platoon unblocked	1.00					
vC, conflicting volume	1319	636	1516			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1320	636	1516			
tC, single (s)	6.5	6.3	4.2			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.3			
p0 queue free %	55	66	77			
cM capacity (veh/h)	125	457	407			
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	57	154	95	492	636	880
Volume Left	57	0	95	0	0	0
Volume Right	0	154	0	0	0	880
cSH	125	457	407	1700	1700	1700
Volume to Capacity	0.45	0.34	0.23	0.29	0.37	0.52
Queue Length (ft)	51	37	22	0	0	0
Control Delay (s)	55.9	16.8	16.5	0.0	0.0	0.0
Lane LOS	F	C	C			
Approach Delay (s)	27.3		2.7		0.0	
Approach LOS	D					
Intersection Summary						
Average Delay			3.2			
Intersection Capacity Utilization			66.4%		ICU Level of Service	B

HCM Unsignalized Intersection Capacity Analysis
3: 228th ST SE - 35th to 45th & 45th Ave SE

Existing Volumes
AM Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Volume (veh/h)	3	325	274	43	210	4	18	12	14	33	117	32
Peak Hour Factor	0.90	0.90	0.90	0.87	0.87	0.87	0.54	0.54	0.54	0.95	0.95	0.95
Hourly flow rate (veh/h)	3	368	311	50	246	5	34	23	26	35	126	34
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None						None					
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	251			679			977	882	524	918	1035	249
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	251			679			977	882	524	918	1035	249
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			94			70	92	95	84	42	96
cM capacity (veh/h)	1315			904			115	268	554	215	218	790
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	682	301	83	195								
Volume Left	3	50	34	35								
Volume Right	311	5	26	34								
cSH	1315	904	194	249								
Volume to Capacity	0.00	0.06	0.43	0.78								
Queue Length (ft)	0	4	49	146								
Control Delay (s)	0.1	2.0	36.8	57.1								
Lane LOS	A	A	E	F								
Approach Delay (s)	0.1	2.0	36.8	57.1								
Approach LOS			E	F								
Intersection Summary												
Average Delay	11.8											
Intersection Capacity Utilization	81.9%		ICU Level of Service		D							



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↱	↱	↰
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	-3%			5%	-5%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	1	1			1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15	9	15			9
Satd. Flow (prot)	1607	1438	1544	1625	1770	1505
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1607	1438	1544	1625	1770	1505
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		62				24
Link Speed (mph)	30			35	45	
Link Distance (ft)	500			2850	500	
Travel Time (s)	11.4			55.5	7.6	
Volume (vph)	229	55	33	283	710	24
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.88	0.88	0.93	0.93
Growth Factor	101%	101%	101%	101%	101%	101%
Heavy Vehicles (%)	14%	14%	14%	14%	10%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Lane Group Flow (vph)	260	62	38	325	771	26
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Total Split (s)	34.0	34.0	17.0	66.0	49.0	49.0
Act Effct Green (s)	18.4	18.4	12.4	50.6	42.5	42.5
Actuated g/C Ratio	0.24	0.24	0.15	0.65	0.55	0.55
v/c Ratio	0.68	0.16	0.17	0.31	0.79	0.03
Uniform Delay, d1	28.2	0.0	33.9	5.4	15.5	0.7
Delay	28.5	7.5	36.3	6.7	25.6	6.3
LOS	C	A	D	A	C	A
Approach Delay	24.5			9.8	25.0	
Approach LOS	C			A	C	
Queue Length 50th (ft)	136	0	19	62	353	1
Queue Length 95th (ft)	216	29	51	131	#688	15
Internal Link Dist (ft)	420			2770	420	
50th Up Block Time (%)						
95th Up Block Time (%)					30%	
Turn Bay Length (ft)						
50th Bay Block Time %						
95th Bay Block Time %						
Queuing Penalty (veh)					117	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 77.6

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 21.2

Intersection LOS: C





Intersection Capacity Utilization 61.6%

ICU Level of Service B

95th percentile volume exceeds capacity, queue may be longer.























Queue shown is maximum after two cycles.

Splits and Phases: 32: SR 522 EB Ramps & SR9

 ø2 66 s	 ø4 34 s
 ø6 49 s	 ø5 17 s

Lanes, Volumes, Timings
6: 228th ST SE - 45 to SR9 & SR9

Existing Volumes
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			-1%			1%			-1%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	100	250		100	250		100	250	100	100	250	100
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1761	*648	0	1778	1732	0	1727	1818	1545	1778	1872	1591
Flt Permitted	0.653			0.156			0.028			0.471		
Satd. Flow (perm)	1210	1579	0	292	1732	0	51	1818	1545	882	1872	1591
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		198			2				22			54
Link Speed (mph)		32			35			45			45	
Link Distance (ft)		2112			1000			1780			5290	
Travel Time (s)		45.0			19.5			27.0			80.2	
Volume (vph)	56	4	252	5	1	1	92	311	18	8	1109	117
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.81	0.81	0.81	0.44	0.44	0.44	0.82	0.82	0.82	0.97	0.97	0.97
Growth Factor	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	70	319	0	11	4	0	113	383	22	8	1155	122
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Total Split (s)	19.6	29.6	0.0	14.6	29.6	0.0	24.6	146.0	146.0	24.6	146.0	146.0
Act Effct Green (s)	30.3	26.7		15.1	14.2		145.8	142.5	142.5	133.8	128.8	128.8
Actuated g/C Ratio	0.16	0.14		0.08	0.07		0.79	0.77	0.77	0.70	0.70	0.70
v/c Ratio	0.27	1.21		0.16	0.03		0.72	0.27	0.02	0.01	0.89	0.11
Uniform Delay, d1	66.9	20.2		65.7	42.5		50.2	7.8	0.0	5.2	23.9	5.3
Delay	73.9	126.1		86.0	73.0		52.8	6.6	2.2	5.4	27.0	5.6
LOS	E	F		F	E		D	A	A	A	C	A
Approach Delay		116.7			82.5			16.5			24.8	
Approach LOS		F			F			B			C	
Queue Length 50th (ft)	82	~270		14	3		90	93	0	2	937	22
Queue Length 95th (ft)	128	#410		18	8		157	186	8	7	1650	59
Internal Link Dist (ft)		2032			920			1700			5210	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary

Area Type: Other

Cycle Length: 219.8

Actuated Cycle Length: 184.7

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.21

Intersection Signal Delay: 39.5

Intersection LOS: D

Intersection Capacity Utilization 96.8%

ICU Level of Service E

* User Entered Value









~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.




















Queue shown is maximum after two cycles.

Splits and Phases: 6: 228th ST SE - 45 to SR9 & SR9

 ø1	 ø2	 ø3	 ø4
24.6 s	146 s	146 s	29.6 s
 ø5	 ø6	 ø7	 ø8
24.6 s	146 s	19.6 s	29.6 s

Lanes, Volumes, Timings
25: Maltby Rd & SR9 - N of SR524







Existing Volumes
AM Peak Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	0		0	300		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1770	1710	0	0	1804	0	1736	1779	0	1770	1848	0
Flt Permitted	0.950				0.982		0.950			0.950		
Satd. Flow (perm)	1770	1710	0	0	1804	0	1736	1779	0	1770	1848	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49			5			13			3	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2929			3076			5290			1234	
Travel Time (s)		57.1			59.9			80.2			18.7	
Volume (vph)	33	134	162	82	119	24	32	176	37	6	869	48
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.75	0.75	0.75	0.86	0.86	0.86	0.95	0.95	0.95
Growth Factor	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	38	340	0	0	302	0	38	250	0	6	975	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Total Split (s)	14.5	14.5	0.0	22.5	22.5	0.0	19.0	47.0	0.0	16.0	44.0	0.0
Act Effct Green (s)	10.6	10.6			17.7		12.1	44.0		14.7	40.4	
Actuated g/C Ratio	0.12	0.12			0.20		0.13	0.49		0.14	0.45	
v/c Ratio	0.18	1.38			0.84		0.18	0.28		0.02	1.17	
Uniform Delay, d1	38.0	33.2			36.8		40.8	14.7		41.3	25.8	
Delay	39.4	186.6			47.7		38.6	16.0		35.2	116.0	
LOS	D	F			D		D	B		D	F	
Approach Delay		171.8			47.7			18.9			115.5	
Approach LOS		F			D			B			F	
Queue Length 50th (ft)	22	~265			179		21	66		3	~771	
Queue Length 95th (ft)	52	#427			#234		50	185		13	#1016	
Internal Link Dist (ft)		2849			2996			5210			1154	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)	150						300			150		
50th Bay Block Time %		48%									54%	
95th Bay Block Time %		69%									59%	
Queuing Penalty (veh)		22									3	

Intersection Summary













Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 89.7
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.38
 Intersection Signal Delay: 101.7 Intersection LOS: F
 Intersection Capacity Utilization 97.7% ICU Level of Service E
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 25: Maltby Rd & SR9 - N of SR524

 ø2	 ø1	 ø4	 ø8
47 s	16 s	14.5 s	22.5 s
 ø5	 ø6		
19 s	44 s		













HCM Unsignalized Intersection Capacity Analysis
30: SR522 WB Ramps & SR9













Existing Volumes
PM Peak-Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	-3%			-5%	5%	
Volume (veh/h)	16	66	32	1047	392	357
Peak Hour Factor	0.82	0.82	0.97	0.97	0.79	0.79
Hourly flow rate (veh/h)	20	81	33	1090	501	456
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)	500					
pX, platoon unblocked	0.78					
vC, conflicting volume	1658	501	958			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1841	501	958			
tC, single (s)	6.5	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.2			
p0 queue free %	67	85	95			
cM capacity (veh/h)	60	558	706			
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	20	81	33	1090	501	456
Volume Left	20	0	33	0	0	0
Volume Right	0	81	0	0	0	456
cSH	60	558	706	1700	1700	1700
Volume to Capacity	0.33	0.15	0.05	0.64	0.29	0.27
Queue Length (ft)	30	13	4	0	0	0
Control Delay (s)	92.6	12.5	10.4	0.0	0.0	0.0
Lane LOS	F	B	B			
Approach Delay (s)	28.2		0.3		0.0	
Approach LOS	D					
Intersection Summary						
Average Delay	1.5					
Intersection Capacity Utilization	67.4%		ICU Level of Service		B	

HCM Unsignalized Intersection Capacity Analysis 3: 228th ST SE - 35th to 45th & 45th Ave SE

Existing Volumes
PM Peak-Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Sign Control	Free			Free			Stop			Stop		
Grade	0%			0%			0%			0%		
Volume (veh/h)	51	295	55	17	389	56	124	120	36	18	24	24
Peak Hour Factor	0.89	0.89	0.89	0.97	0.97	0.97	0.91	0.91	0.91	0.69	0.69	0.69
Hourly flow rate (veh/h)	58	335	62	18	405	58	138	133	40	26	35	35
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type	None						None					
Median storage veh												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	463			397			1004	980	366	1058	983	434
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	463			397			1004	980	366	1058	983	434
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	95			98			21	43	94	73	85	94
cM capacity (veh/h)	1087			1161			175	233	679	99	232	622
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	455	481	311	97								
Volume Left	58	18	138	26								
Volume Right	62	58	40	35								
cSH	1087	1161	219	204								
Volume to Capacity	0.05	0.02	1.42	0.47								
Queue Length (ft)	4	1	449	58								
Control Delay (s)	1.6	0.5	255.1	37.5								
Lane LOS	A	A	F	E								
Approach Delay (s)	1.6	0.5	255.1	37.5								
Approach LOS			F	E								
Intersection Summary												
Average Delay	62.4											
Intersection Capacity Utilization	84.2%		ICU Level of Service				D					

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	-3%			5%	-5%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	1	1			1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15	9	15			9
Satd. Flow (prot)	1696	1518	1676	1764	1820	1547
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1696	1518	1676	1764	1820	1547
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		58				68
Link Speed (mph)	30			35	45	
Link Distance (ft)	500			2850	500	
Travel Time (s)	11.4			55.5	7.6	
Volume (vph)	573	59	154	568	447	56
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.95	0.95	0.83	0.83
Growth Factor	101%	101%	101%	101%	101%	101%
Heavy Vehicles (%)	8%	8%	5%	5%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Lane Group Flow (vph)	603	62	164	604	544	68
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Total Split (s)	34.0	34.0	17.0	66.0	49.0	49.0
Act Effct Green (s)	30.3	30.3	12.9	49.5	32.6	32.6
Actuated g/C Ratio	0.34	0.34	0.15	0.56	0.37	0.37
v/c Ratio	1.03	0.11	0.67	0.61	0.81	0.11
Uniform Delay, d1	28.7	1.2	35.3	12.7	24.8	0.0
Delay	80.6	7.8	45.6	12.6	24.0	3.9
LOS	F	A	D	B	C	A
Approach Delay	73.8			19.7	21.8	
Approach LOS	E			B	C	
Queue Length 50th (ft)	~365	2	87	204	247	0
Queue Length 95th (ft)	#676	32	#203	298	294	15
Internal Link Dist (ft)	420			2770	420	
50th Up Block Time (%)						
95th Up Block Time (%)	42%					
Turn Bay Length (ft)						
50th Bay Block Time %						
95th Bay Block Time %						
Queuing Penalty (veh)						

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 87.9

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 37.9

Intersection LOS: D

Intersection Capacity Utilization 81.1%

ICU Level of Service D

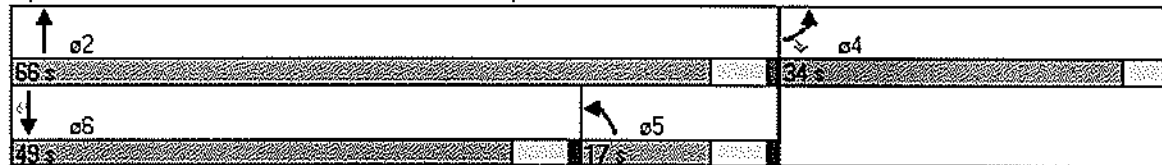
- Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

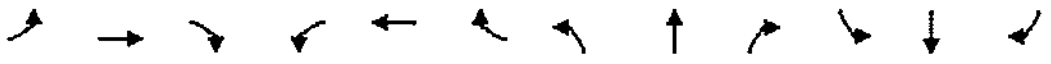
Queue shown is maximum after two cycles.

Splits and Phases: 32: SR 522 EB Ramps & SR9



Lanes, Volumes, Timings
6: 228th ST SE - 45 to SR9 & SR9









Existing Volumes
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↱		↰	↱		↰	↱		↰	↱	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			-1%			1%			-1%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	100	250		100	250		100	250	100	100	250	100
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1761	*136	0	1778	1838	0	1761	1853	1575	1744	1836	1561
Flt Permitted	0.636			0.388			0.407			0.125		
Satd. Flow (perm)	1179	1587	0	726	1838	0	754	1853	1575	230	1836	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		136			3				5			78
Link Speed (mph)		32			35			45			45	
Link Distance (ft)		2112			1000			1780			5290	
Travel Time (s)		45.0			19.5			27.0			80.2	
Volume (vph)	132	6	130	28	20	3	115	914	9	2	430	70
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.81	0.81	0.81	0.70	0.70	0.70	0.95	0.95	0.95	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	163	167	0	40	33	0	121	962	9	2	478	78
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Total Split (s)	19.6	29.6	0.0	14.6	29.6	0.0	24.6	146.0	146.0	24.6	146.0	146.0
Act Effect Green (s)	35.0	0.0		17.0	13.2		78.1	77.3	77.3	72.2	68.7	68.7
Actuated g/C Ratio	0.29	0.00		0.13	0.10		0.63	0.63	0.63	0.56	0.56	0.56
v/c Ratio	0.36	1.23		0.26	0.17		0.22	0.82	0.01	0.01	0.46	0.09
Uniform Delay, d1	35.2	0.0		34.8	50.0		8.6	20.7	4.4	8.5	16.6	0.0
Delay	44.3	123.4		47.6	57.6		7.8	16.5	5.8	8.0	15.5	2.3
LOS	D	F		D	E		A	B	A	A	B	A
Approach Delay		84.3			52.1			15.5			13.6	
Approach LOS		F			D			B			B	
Queue Length 50th (ft)	95	~49		22	20		34	529	1	1	226	0
Queue Length 95th (ft)	246	#196		65	59		58	888	8	3	324	20
Internal Link Dist (ft)		2032			920			1700			5210	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary




















Area Type: Other
Cycle Length: 219.8
Actuated Cycle Length: 122.5
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.23
Intersection Signal Delay: 27.3 Intersection LOS: C
Intersection Capacity Utilization 79.7% ICU Level of Service C
* User Entered Value
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: 228th ST SE - 45 to SR9 & SR9

 ø1	 ø2	 ø3	 ø4
24.6 s	14.6 s	14.6 s	29.6 s
 ø5	 ø6	 ø7	 ø8
24.6 s	14.6 s	19.6 s	29.6 s

Lanes, Volumes, Timings
25: Maltby Rd & SR9 - N of SR524







Existing Volumes
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	0		0	300		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1770	1798	0	0	1822	0	1770	1842	0	1736	1803	0
Flt Permitted	0.950				0.993		0.950			0.950		
Satd. Flow (perm)	1770	1798	0	0	1822	0	1770	1842	0	1736	1803	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			6			5			6	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2929			3076			5290			1234	
Travel Time (s)		57.1			59.9			80.2			18.7	
Volume (vph)	76	143	43	36	183	28	137	854	66	16	337	31
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.81	0.81	0.81	0.95	0.95	0.95	0.87	0.87	0.87
Growth Factor	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%	101%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	81	198	0	0	308	0	146	978	0	19	427	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Total Split (s)	14.5	14.5	0.0	22.5	22.5	0.0	19.0	47.0	0.0	16.0	44.0	0.0
Act Effct Green (s)	10.6	10.6			17.8		13.7	43.9		12.0	31.9	
Actuated g/C Ratio	0.12	0.12			0.20		0.15	0.49		0.12	0.35	
v/c Ratio	0.39	0.89			0.84		0.54	1.09		0.09	0.67	
Uniform Delay, d1	38.7	38.7			36.2		37.3	24.9		41.9	23.1	
Delay	40.1	74.9			50.8		37.5	81.2		39.8	24.6	
LOS	D	E			D		D	F		D	C	
Approach Delay		64.8			50.8			75.5			25.3	
Approach LOS		E			D			E			C	
Queue Length 50th (ft)	41	101			156		73	~513		9	204	
Queue Length 95th (ft)	97	#267			#290		152	#1023		32	292	
Internal Link Dist (ft)		2849			2996			5210			1154	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)	150						300			150		
50th Bay Block Time %								24%			23%	
95th Bay Block Time %		49%						56%			32%	
Queuing Penalty (veh)		20						58			5	

Intersection Summary













Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 90.2
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.09
 Intersection Signal Delay: 60.2
 Intersection LOS: E
 Intersection Capacity Utilization 101.1%
 ICU Level of Service F
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 25: Maltby Rd & SR9 - N of SR524

 ø2 47 s	 ø1 16 s	 ø4 14.5 s	 ø8 22.5 s
 ø5 19 s	 ø6 44 s		

HCM Unsignalized Intersection Capacity Analysis
30: SR522 WB Ramps & SR9

Future Volumes without Brightwater
AM Peak-Hour

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Sign Control	Stop			Free	Free	
Grade	-3%			-5%	5%	
Volume (veh/h)	50	136	83	658	758	838
Peak Hour Factor	0.89	0.89	0.88	0.88	0.93	0.93
Hourly flow rate (veh/h)	56	153	94	748	815	901
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)	500					
pX, platoon unblocked	0.86					
vC, conflicting volume	1751	815	1716			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1873	815	1716			
tC, single (s)	6.5	6.3	4.2			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.3			
p0 queue free %	0	58	72			
cM capacity (veh/h)	46	360	339			
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	56	153	94	748	815	901
Volume Left	56	0	94	0	0	0
Volume Right	0	153	0	0	0	901
cSH	46	360	339	1700	1700	1700
Volume to Capacity	1.23	0.42	0.28	0.44	0.48	0.53
Queue Length (ft)	132	51	28	0	0	0
Control Delay (s)	349.1	22.2	19.6	0.0	0.0	0.0
Lane LOS	F	C	C			
Approach Delay (s)	110.1		2.2		0.0	
Approach LOS	F					
Intersection Summary						
Average Delay	9.0					
Intersection Capacity Utilization	67.7%		ICU Level of Service		B	



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↱	↱	↰
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	-3%			5%	-5%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	1	1			1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15	9	15			9
Satd. Flow (prot)	1607	1438	1544	1625	1770	1505
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1607	1438	1544	1625	1770	1505
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		96				79
Link Speed (mph)	30			35	45	
Link Distance (ft)	500			2850	500	
Travel Time (s)	11.4			55.5	7.6	
Volume (vph)	240	85	37	501	817	89
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.88	0.88	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	10%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Lane Group Flow (vph)	270	96	42	569	878	96
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Total Split (s)	34.0	34.0	17.0	66.0	49.0	49.0
Act Effct Green (s)	19.3	19.3	12.2	56.2	47.5	47.5
Actuated g/C Ratio	0.23	0.23	0.14	0.67	0.57	0.57
v/c Ratio	0.73	0.24	0.20	0.52	0.87	0.11
Uniform Delay, d1	31.3	0.0	36.9	6.6	17.2	1.6
Delay	30.2	6.1	37.2	8.4	41.7	4.8
LOS	C	A	D	A	D	A
Approach Delay	23.9			10.4	38.1	
Approach LOS	C			B	D	
Queue Length 50th (ft)	142	0	21	137	463	4
Queue Length 95th (ft)	224	36	56	278	861	31
Internal Link Dist (ft)	420			2770	420	
50th Up Block Time (%)					11%	
95th Up Block Time (%)					42%	
Turn Bay Length (ft)						
50th Bay Block Time %						
95th Bay Block Time %						
Queuing Penalty (veh)					233	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 83.7

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 26.7

Intersection LOS: C





Intersection Capacity Utilization 67.8%























ICU Level of Service B

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 32: SR 522 EB Ramps & SR9

 ø2	 ø4
66 s	34 s
 ø6	 ø5
49 s	17 s

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			-1%			1%			-1%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	100	250		100	250		100	250	100	100	250	100
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1761	*648	0	1778	1861	0	1727	1818	1545	1778	1872	1591
Flt Permitted	0.582			0.156			0.028			0.414		
Satd. Flow (perm)	1079	1614	0	292	1861	0	51	1818	1545	775	1872	1591
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		117			1				205			52
Link Speed (mph)		32			35			45			45	
Link Distance (ft)		2112			1000			1780			5290	
Travel Time (s)		45.0			19.5			27.0			80.2	
Volume (vph)	56	46	284	65	22	1	100	383	168	58	1217	125
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.81	0.81	0.81	0.44	0.44	0.44	0.82	0.82	0.82	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	69	408	0	148	52	0	122	467	205	60	1255	129
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Total Split (s)	19.6	29.6	0.0	14.6	29.6	0.0	24.6	146.0	146.0	24.6	146.0	146.0
Act Effct Green (s)	38.3	25.6		29.4	20.2		160.6	150.2	150.2	148.7	142.1	142.1
Actuated g/C Ratio	0.18	0.12		0.14	0.10		0.77	0.72	0.72	0.71	0.68	0.68
v/c Ratio	0.27	2.24		1.28	0.29		0.77	0.36	0.18	0.10	0.99	0.12
Uniform Delay, d1	70.7	33.4		75.2	87.7		58.4	11.4	0.0	6.3	33.4	6.9
Delay	72.6	360.0		197.8	86.4		58.1	11.3	0.9	6.3	52.0	7.3
LOS	E	F		F	F		E	B	A	A	D	A
Approach Delay		318.4			168.9			15.8			46.1	
Approach LOS		F			F			B			D	
Queue Length 50th (ft)	82	~762		~195	65		116	231	0	18	1627	35
Queue Length 95th (ft)	125	#881		125	58		175	262	16	31	#2127	67
Internal Link Dist (ft)		2032			920			1700			5210	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary

Area Type: Other

Cycle Length: 219.8

Actuated Cycle Length: 209.1

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 2.24

Intersection Signal Delay: 90.8

Intersection LOS: F

Intersection Capacity Utilization 118.9%

ICU Level of Service G

* User Entered Value









~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

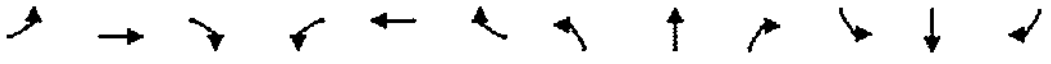
Queue shown is maximum after two cycles.

Splits and Phases: 6: 228th ST SE - 45 to SR9 & SR9

 ø1	 ø2	 ø3	 ø4
24.6 s	146 s	14.6 s	29.6 s
 ø5	 ø6	 ø7	 ø8
24.6 s	146 s	19.6 s	29.6 s

Lanes, Volumes, Timings
25: Maltby Rd & SR9 - N of SR524

Future Volumes without Brightwater
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	0		0	300		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1770	1699	0	0	1800	0	1736	1768	0	1770	1848	0
Flt Permitted	0.950				0.980		0.950			0.950		
Satd. Flow (perm)	1770	1699	0	0	1800	0	1736	1768	0	1770	1848	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		57			5			17			3	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2929			3076			5290			1234	
Travel Time (s)		57.1			59.9			80.2			18.7	
Volume (vph)	33	134	191	96	119	24	50	209	58	7	992	55
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.75	0.75	0.75	0.86	0.86	0.86	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	38	369	0	0	319	0	58	310	0	7	1102	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Total Split (s)	14.5	14.5	0.0	22.5	22.5	0.0	19.0	47.0	0.0	16.0	44.0	0.0
Act Effct Green (s)	10.6	10.6			18.2		12.4	48.1		14.2	40.3	
Actuated g/C Ratio	0.11	0.11			0.19		0.13	0.51		0.13	0.43	
v/c Ratio	0.19	1.52			0.90		0.26	0.34		0.03	1.39	
Uniform Delay, d1	40.2	33.2			39.1		41.1	14.7		43.9	27.4	
Delay	40.4	202.7			58.7		38.9	15.3		37.1	168.2	
LOS	D	F			E		D	B		D	F	
Approach Delay		187.5			58.7			19.0			167.3	
Approach LOS		F			E			B			F	
Queue Length 50th (ft)	22	~295			192		33	86		4	~939	
Queue Length 95th (ft)	52	#470			#264		68	220		15	#1218	
Internal Link Dist (ft)		2849			2996			5210			1154	
50th Up Block Time (%)												
95th Up Block Time (%)											13%	
Turn Bay Length (ft)	150						300			150		
50th Bay Block Time %		54%									58%	
95th Bay Block Time %		72%									61%	
Queuing Penalty (veh)		23									4	

Intersection Summary

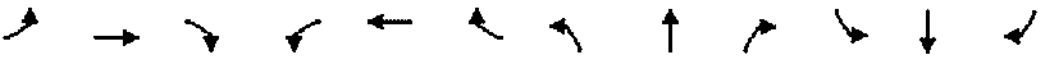








Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 93.8
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.52
 Intersection Signal Delay: 130.6
 Intersection LOS: F
 Intersection Capacity Utilization 107.2%
 ICU Level of Service F
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 25: Maltby Rd & SR9 - N of SR524

↑ ø2 47 s	↘ ø1 16 s	↗ ø4 14.5 s	↖ ø8 22.5 s
↙ ø5 19 s	↓ ø6 44 s		

Lanes, Volumes, Timings
3: 228th ST SE - 35th to 45th & 45th Ave SE

Future Volumes without Brightwater
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		100	50		50	250		100	250	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1770	1745	0	1736	1818	0	0	1741	0	0	1798	0
Flt Permitted	0.585			0.261				0.860			0.920	
Satd. Flow (perm)	1090	1745	0	477	1818	0	0	1527	0	0	1671	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		123			6			33			20	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2000			1320			1000			1500	
Travel Time (s)		39.0			25.7			22.7			34.1	
Volume (vph)	4	391	280	47	239	9	20	13	18	42	121	37
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.87	0.87	0.87	0.54	0.54	0.54	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	4	745	0	54	285	0	0	94	0	0	210	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	38.0	38.0	0.0	38.0	38.0	0.0	17.0	17.0	0.0	17.0	17.0	0.0
Act Effct Green (s)	26.2	26.2		26.2	26.2			11.8			11.8	
Actuated g/C Ratio	0.57	0.57		0.57	0.57			0.25			0.25	
v/c Ratio	0.01	0.72		0.20	0.28			0.23			0.48	
Uniform Delay, d1	4.2	5.8		4.8	4.9			8.6			13.0	
Delay	4.2	6.4		5.4	5.2			10.9			13.8	
LOS	A	A		A	A			B			B	
Approach Delay		6.4			5.2			10.9			13.8	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)	1	86		5	29			10			33	
Queue Length 95th (ft)	3	201		19	60			23			109	
Internal Link Dist (ft)		1920			1240			920			1420	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary

Area Type: Other

Cycle Length: 55

Actuated Cycle Length: 46.3

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.72





Intersection Signal Delay: 7.5

Intersection LOS: A

Intersection Capacity Utilization 66.7%

ICU Level of Service B

Splits and Phases: 3: 228th ST SE - 35th to 45th & 45th Ave SE













 ø2	 ø4
38 s	17 s
 ø6	 ø8
38 s	17 s

HCM Unsignalized Intersection Capacity Analysis
30: SR522 WB Ramps & SR9

Future Volumes without Brightwater
PM Peak-Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	←	→	←	↑	↑	↖
Sign Control	Stop			Free	Free	
Grade	-3%			-5%	5%	
Volume (veh/h)	36	66	32	1272	661	376
Peak Hour Factor	0.82	0.82	0.97	0.97	0.79	0.79
Hourly flow rate (veh/h)	44	80	33	1311	837	476
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)				500		
pX, platoon unblocked	0.63					
vC, conflicting volume	2214	837	1313			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2917	837	1313			
tC, single (s)	6.5	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.2			
p0 queue free %	0	78	94			
cM capacity (veh/h)	10	358	517			
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	44	80	33	1311	837	476
Volume Left	44	0	33	0	0	0
Volume Right	0	80	0	0	0	476
cSH	10	358	517	1700	1700	1700
Volume to Capacity	4.55	0.22	0.06	0.77	0.49	0.28
Queue Length (ft)	Err	21	5	0	0	0
Control Delay (s)	Err	17.9	12.4	0.0	0.0	0.0
Lane LOS	F	C	B			
Approach Delay (s)	3540.7		0.3		0.0	
Approach LOS	F					
Intersection Summary						
Average Delay			158.5			
Intersection Capacity Utilization			79.0%	ICU Level of Service		C

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	-3%			5%	-5%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	1	1			1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15	9	15			9
Satd. Flow (prot)	1696	1518	1676	1764	1820	1547
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1696	1518	1676	1764	1820	1547
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		65				305
Link Speed (mph)	30			45	45	
Link Distance (ft)	500			2850	500	
Travel Time (s)	11.4			43.2	7.6	
Volume (vph)	586	67	172	780	519	253
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.95	0.95	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	5%	5%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Lane Group Flow (vph)	610	70	181	821	625	305
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Total Split (s)	34.0	34.0	17.0	66.0	49.0	49.0
Act Effct Green (s)	30.2	30.2	12.9	54.2	37.3	37.3
Actuated g/C Ratio	0.33	0.33	0.14	0.59	0.40	0.40
v/c Ratio	1.10	0.13	0.78	0.79	0.85	0.38
Uniform Delay, d1	31.1	1.5	38.4	14.8	25.1	0.0
Delay	97.2	7.8	54.4	15.1	24.9	2.0
LOS	F	A	D	B	C	A
Approach Delay	88.0			22.2	17.4	
Approach LOS	F			C	B	
Queue Length 50th (ft)	~438	2	108	341	317	0
Queue Length 95th (ft)	#687	34	#232	507	391	29
Internal Link Dist (ft)	420			2770	420	
50th Up Block Time (%)	10%					
95th Up Block Time (%)	43%				2%	
Turn Bay Length (ft)						
50th Bay Block Time %						
95th Bay Block Time %						
Queuing Penalty (veh)						

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 92.5

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.10

Intersection Signal Delay: 37.6

Intersection LOS: D

Intersection Capacity Utilization 86.8%

ICU Level of Service D





- Volume exceeds capacity, queue is theoretically infinite.























Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 32: SR 522 EB Ramps & SR9

 ø2	 ø4
66 s	34 s
 ø6	 ø5
49 s	17 s

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			-1%			1%			-1%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	100	250		100	250		100	250	100	100	250	100
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1761	*136	0	1778	1861	0	1761	1853	1575	1744	1836	1561
Flt Permitted	0.412			0.190			0.374			0.041		
Satd. Flow (perm)	764	1629	0	356	1861	0	693	1853	1575	75	1836	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		80			1				38			81
Link Speed (mph)		32			35			45			45	
Link Distance (ft)		2112			1000			1780			5290	
Travel Time (s)		45.0			19.5			27.0			80.2	
Volume (vph)	145	35	146	254	70	3	152	1053	78	36	476	76
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.81	0.81	0.81	0.70	0.70	0.70	0.95	0.95	0.95	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	179	223	0	363	104	0	160	1108	82	40	529	84
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Total Split (s)	19.6	29.6	0.0	14.6	29.6	0.0	24.6	146.0	146.0	24.6	146.0	146.0
Act Effct Green (s)	40.6	27.0		34.8	23.8		134.2	126.7	126.7	126.5	120.3	120.3
Actuated g/C Ratio	0.22	0.15		0.19	0.13		0.73	0.68	0.68	0.68	0.65	0.65
v/c Ratio	0.73	2.53		2.39	0.44		0.29	0.87	0.08	0.37	0.44	0.08
Uniform Delay, d1	62.0	7.2		63.7	73.9		7.4	23.3	5.2	7.4	15.4	0.4
Delay	72.3	378.0		365.2	82.6		6.9	23.0	5.3	9.1	15.0	2.1
LOS	E	F		F	F		A	C	A	A	B	A
Approach Delay		241.9			302.2			20.0			13.0	
Approach LOS		F			F			C			B	
Queue Length 50th (ft)	213	~376		~768	132		52	1004	17	12	290	1
Queue Length 95th (ft)	272	#496		#724	159		78	1326	38	30	391	22
Internal Link Dist (ft)		2032			920			1700			5210	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary

Area Type: Other

Cycle Length: 219.8

Actuated Cycle Length: 185

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 2.53

Intersection Signal Delay: 95.4

Intersection LOS: F

Intersection Capacity Utilization 108.5%

ICU Level of Service F

* User Entered Value









~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.


Queue shown is maximum after two cycles.

Splits and Phases: 6: 228th ST SE - 45 to SR9 & SR9

 ø1	 ø2	 ø3	 ø4
24.6 s	14.6 s	14.6 s	29.6 s
 ø5	 ø6	 ø7	 ø8
24.6 s	14.6 s	19.6 s	29.6 s

Lanes, Volumes, Timings
25: Maltby Rd & SR9 - N of SR524







Future Volumes without Brightwater
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	0		0	300		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1770	1783	0	0	1813	0	1770	1842	0	1736	1805	0
Flt Permitted	0.950				0.991		0.950			0.950		
Satd. Flow (perm)	1770	1783	0	0	1813	0	1770	1842	0	1736	1805	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		16			7			5			5	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2929			3076			5290			1234	
Travel Time (s)		57.1			59.9			80.2			18.7	
Volume (vph)	96	143	58	49	183	35	157	977	75	19	395	36
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.81	0.81	0.81	0.95	0.95	0.95	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	101	212	0	0	329	0	165	1107	0	22	495	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Total Split (s)	14.5	14.5	0.0	22.5	22.5	0.0	19.0	47.0	0.0	16.0	44.0	0.0
Act Effct Green (s)	10.6	10.6			18.6		14.0	44.8		12.0	32.6	
Actuated g/C Ratio	0.12	0.12			0.20		0.15	0.49		0.12	0.35	
v/c Ratio	0.50	0.97			0.88		0.61	1.23		0.11	0.77	
Uniform Delay, d1	40.1	39.3			37.0		38.4	25.3		42.8	24.9	
Delay	41.0	85.4			58.5		38.3	117.7		40.4	26.3	
LOS	D	F			E		D	F		D	C	
Approach Delay		71.0			58.5			107.4			26.9	
Approach LOS		E			E			F			C	
Queue Length 50th (ft)	56	115			183		89	~728		11	253	
Queue Length 95th (ft)	116	#286			#319		170	#1205		35	353	
Internal Link Dist (ft)		2849			2996			5210			1154	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)	150						300			150		
50th Bay Block Time %								34%			30%	
95th Bay Block Time %		53%						61%			37%	
Queuing Penalty (veh)		26						78			7	

Intersection Summary


Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 91.9
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.23
 Intersection Signal Delay: 79.0 Intersection LOS: E
 Intersection Capacity Utilization 110.1% ICU Level of Service G
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 25: Maltby Rd & SR9 - N of SR524

 ø2	 ø1	 ø4	 ø8
47 s	16 s	14.5 s	22.5 s
 ø5	 ø6		
19 s	44 s		

Lanes, Volumes, Timings
3: 228th ST SE - 35th to 45th & 45th Ave SE





Future Volumes without Brightwater
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		100	50		50	250		100	250	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1736	1787	0	1770	1829	0	0	1789	0	0	1747	0
Flt Permitted	0.318			0.409				0.805			0.856	
Satd. Flow (perm)	581	1787	0	762	1829	0	0	1473	0	0	1516	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		28			23			21			41	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2000			1320			1000			1500	
Travel Time (s)		39.0			25.7			22.7			34.1	
Volume (vph)	57	343	59	22	465	65	132	125	38	23	27	28
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.97	0.97	0.97	0.91	0.91	0.91	0.69	0.69	0.69
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	64	451	0	23	546	0	0	324	0	0	113	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	22.0	22.0	0.0	22.0	22.0	0.0	18.0	18.0	0.0	18.0	18.0	0.0
Act Effct Green (s)	15.7	15.7		15.7	15.7			12.6			12.6	
Actuated g/C Ratio	0.43	0.43		0.43	0.43			0.35			0.35	
v/c Ratio	0.25	0.57		0.07	0.68			0.62			0.21	
Uniform Delay, d1	6.5	7.2		6.0	7.8			9.2			5.2	
Delay	7.6	7.9		6.6	8.7			11.0			6.6	
LOS	A	A		A	A			B			A	
Approach Delay		7.9			8.6			11.0			6.6	
Approach LOS		A			A			B			A	
Queue Length 50th (ft)	8	62		3	82			51			10	
Queue Length 95th (ft)	26	120		11	159			#122			24	
Internal Link Dist (ft)		1920			1240			920			1420	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary

Area Type: Other
 Cycle Length: 40
 Actuated Cycle Length: 36.4
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 0.68
 Intersection Signal Delay: 8.7 Intersection LOS: A
 Intersection Capacity Utilization 72.1% ICU Level of Service C
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 3: 228th ST SE - 35th to 45th & 45th Ave SE













 ø2	 ø4
22 s	18 s
 ø6	 ø8
22 s	18 s

HCM Unsignalized Intersection Capacity Analysis
30: SR522 WB Ramps & SR9

Future Volumes with Brightwater
AM Peak-Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↱	↱	↰
Sign Control	Stop			Free	Free	
Grade	-3%			-5%	5%	
Volume (veh/h)	51	136	83	432	685	817
Peak Hour Factor	0.89	0.89	0.88	0.88	0.93	0.93
Hourly flow rate (veh/h)	57	153	94	491	737	878
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)	500					
pX, platoon unblocked	0.99					
vC, conflicting volume	1416	737	1615			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1418	737	1615			
tC, single (s)	6.5	6.3	4.2			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.3			
p0 queue free %	46	62	75			
cM capacity (veh/h)	106	400	372			
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	57	153	94	491	737	878
Volume Left	57	0	94	0	0	0
Volume Right	0	153	0	0	0	878
cSH	106	400	372	1700	1700	1700
Volume to Capacity	0.54	0.38	0.25	0.29	0.43	0.52
Queue Length (ft)	63	44	25	0	0	0
Control Delay (s)	73.7	19.5	17.9	0.0	0.0	0.0
Lane LOS	F	C	C			
Approach Delay (s)	34.3		2.9		0.0	
Approach LOS	D					
Intersection Summary						
Average Delay	3.7					
Intersection Capacity Utilization	66.3%		ICU Level of Service		B	

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	-3%			5%	-5%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	1	1			1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15	9	15			9
Satd. Flow (prot)	1607	1438	1544	1625	1770	1505
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1607	1438	1544	1625	1770	1505
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		96				44
Link Speed (mph)	30			35	45	
Link Distance (ft)	500			2850	500	
Travel Time (s)	11.4			55.5	7.6	
Volume (vph)	226	85	37	289	785	48
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.89	0.89	0.88	0.88	0.93	0.93
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	14%	14%	14%	14%	10%	10%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Lane Group Flow (vph)	254	96	42	328	844	52
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Total Split (s)	34.0	34.0	17.0	66.0	49.0	49.0
Act Effct Green (s)	18.5	18.5	12.2	56.7	47.9	47.9
Actuated g/C Ratio	0.22	0.22	0.14	0.68	0.58	0.58
v/c Ratio	0.71	0.24	0.20	0.30	0.83	0.06
Uniform Delay, d1	31.4	0.0	36.6	5.1	16.1	1.3
Delay	30.2	6.2	36.6	6.4	33.1	5.4
LOS	C	A	D	A	C	A
Approach Delay	23.6			9.9	31.5	
Approach LOS	C			A	C	
Queue Length 50th (ft)	132	0	21	61	416	2
Queue Length 95th (ft)	212	36	55	131	#791	22
Internal Link Dist (ft)	420			2770	420	
50th Up Block Time (%)					6%	
95th Up Block Time (%)					38%	
Turn Bay Length (ft)						
50th Bay Block Time %						
95th Bay Block Time %						
Queuing Penalty (veh)					187	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 83.3

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.83

Intersection Signal Delay: 24.8

Intersection LOS: C





Intersection Capacity Utilization 65.2%

ICU Level of Service B

95th percentile volume exceeds capacity, queue may be longer.


Queue shown is maximum after two cycles.

Splits and Phases: 32: SR 522 EB Ramps & SR9

 ø2 66 s	 ø4 34 s
 ø6 49 s	 ø5 17 s

Lanes, Volumes, Timings
6: 228th ST SE - 45 to SR9 & SR9

Future Volumes with Brightwater
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SEB
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			-1%			1%			-1%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	100	250		100	250		100	250	100	100	250	100
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1761	*648	0	1778	1732	0	1727	1818	1545	1778	1872	1591
Flt Permitted	0.645			0.156			0.028			0.458		
Satd. Flow (perm)	1195	1603	0	292	1732	0	51	1818	1545	857	1872	1591
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		171			9				30			54
Link Speed (mph)		32			35			45			45	
Link Distance (ft)		2112			1000			1780			5290	
Travel Time (s)		45.0			19.5			27.0			80.2	
Volume (vph)	56	31	277	10	4	4	98	329	25	9	1184	125
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.81	0.81	0.81	0.44	0.44	0.44	0.82	0.82	0.82	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	69	380	0	23	18	0	120	401	30	9	1221	129
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Total Split (s)	19.6	29.6	0.0	14.6	29.6	0.0	24.6	146.0	146.0	24.6	146.0	146.0
Act Effct Green (s)	32.6	25.6		18.6	14.1		160.4	156.8	156.8	147.5	142.4	142.4
Actuated g/C Ratio	0.16	0.13		0.09	0.07		0.80	0.78	0.78	0.71	0.71	0.71
v/c Ratio	0.28	1.64		0.30	0.14		0.76	0.28	0.02	0.01	0.92	0.11
Uniform Delay, d1	74.1	23.4		73.0	45.9		56.3	7.5	0.0	5.0	25.6	5.4
Delay	74.1	248.9		74.8	54.1		55.3	7.2	2.1	6.1	37.6	6.4
LOS	E	F		E	D		E	A	A	A	D	A
Approach Delay		222.0			65.7			17.4			34.4	
Approach LOS		F			E			B			C	
Queue Length 50th (ft)	81	~531		26	11		110	137	0	2	1396	31
Queue Length 95th (ft)	125	#658		29	16		171	205	9	8	#2006	65
Internal Link Dist (ft)		2032			920			1700			5210	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary

Area Type: Other

Cycle Length: 219.8

Actuated Cycle Length: 201

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.64

Intersection Signal Delay: 66.2

Intersection LOS: E

Intersection Capacity Utilization 104.0%

ICU Level of Service F

* User Entered Value









~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

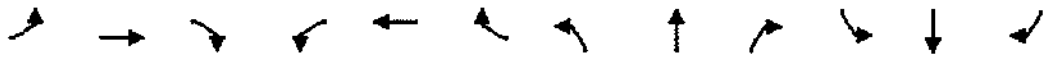
Queue shown is maximum after two cycles.

Splits and Phases: 6: 228th ST SE - 45 to SR9 & SR9

 ø1	 ø2	 ø3	 ø4
24.6 s	146 s	14.6 s	29.6 s
 ø5	 ø6	 ø7	 ø8
24.6 s	146 s	19.6 s	29.6 s

Lanes, Volumes, Timings
25: Maltby Rd & SR9 - N of SR524

Future Volumes with Brightwater
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SEB
Lane Configurations	↰	↱			↕		↰	↱		↰	↱	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	0		0	300		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1770	1708	0	0	1804	0	1736	1787	0	1770	1848	0
Flt Permitted	0.950				0.982		0.950			0.950		
Satd. Flow (perm)	1770	1708	0	0	1804	0	1736	1787	0	1770	1848	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		49			5			11			3	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2929			3076			5290			1234	
Travel Time (s)		57.1			59.9			80.2			18.7	
Volume (vph)	33	134	164	81	119	24	29	201	35	7	952	54
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.88	0.88	0.88	0.75	0.75	0.75	0.86	0.86	0.86	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	4%	4%	4%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	38	338	0	0	299	0	34	275	0	7	1059	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Total Split (s)	14.5	14.5	0.0	22.5	22.5	0.0	19.0	47.0	0.0	16.0	44.0	0.0
Act Effct Green (s)	10.6	10.6			17.5		12.0	44.4		14.3	40.4	
Actuated g/C Ratio	0.12	0.12			0.20		0.13	0.50		0.14	0.45	
v/c Ratio	0.18	1.37			0.84		0.16	0.31		0.03	1.27	
Uniform Delay, d1	37.9	33.1			36.8		40.7	14.9		41.7	25.7	
Delay	39.3	182.3			46.6		38.5	15.8		36.1	142.6	
LOS	D	F			D		D	B		D	F	
Approach Delay		167.8			46.6			18.3			141.9	
Approach LOS		F			D			B			F	
Queue Length 50th (ft)	22	~263			177		19	75		4	~882	
Queue Length 95th (ft)	52	#422			#223		45	199		15	#1130	
Internal Link Dist (ft)		2849			2996			5210			1154	
50th Up Block Time (%)												
95th Up Block Time (%)											3%	
Turn Bay Length (ft)	150						300			150		
50th Bay Block Time %		48%									56%	
95th Bay Block Time %		69%									60%	
Queuing Penalty (veh)		22									4	

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 89.6

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.37

Intersection Signal Delay: 114.2

Intersection LOS: F

Intersection Capacity Utilization 101.9%

ICU Level of Service F







- Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

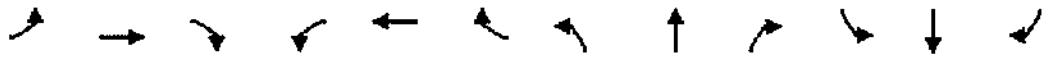







Queue shown is maximum after two cycles.

Splits and Phases: 25: Maltby Rd & SR9 - N of SR524

 ø2	 ø1	 ø4	 ø8
47 s	16 s	14.5 s	22.5 s
 ø5	 ø6		
19 s	44 s		

Lanes, Volumes, Timings
3: 228th ST SE - 35th to 45th & 45th Ave SE

Future Volumes with Brightwater
AM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		100	50		50	250		100	250	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1770	1740	0	1736	1818	0	0	1749	0	0	1796	0
Flt Permitted	0.596			0.273				0.864			0.929	
Satd. Flow (perm)	1110	1740	0	499	1818	0	0	1542	0	0	1685	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		139			6			28			22	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2000			1320			1000			1500	
Travel Time (s)		39.0			25.7			22.7			34.1	
Volume (vph)	4	355	280	44	223	8	20	13	15	38	121	37
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.87	0.87	0.87	0.54	0.54	0.54	0.95	0.95	0.95
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	4	705	0	51	265	0	0	89	0	0	206	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	33.5	33.5	0.0	33.5	33.5	0.0	16.5	16.5	0.0	16.5	16.5	0.0
Act Effct Green (s)	28.1	28.1		28.1	28.1			12.3			12.3	
Actuated g/C Ratio	0.61	0.61		0.61	0.61			0.25			0.25	
v/c Ratio	0.01	0.63		0.17	0.24			0.22			0.47	
Uniform Delay, d1	3.8	4.6		4.1	4.2			9.8			13.8	
Delay	4.5	5.7		5.5	5.0			10.0			12.1	
LOS	A	A		A	A			B			B	
Approach Delay		5.7			5.1			10.0			12.1	
Approach LOS		A			A			B			B	
Queue Length 50th (ft)	1	73		5	26			9			30	
Queue Length 95th (ft)	3	176		18	56			21			95	
Internal Link Dist (ft)		1920			1240			920			1420	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary

Area Type: Other

Cycle Length: 50

Actuated Cycle Length: 45.7

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.63





Intersection Signal Delay: 6.9

Intersection LOS: A

Intersection Capacity Utilization 64.4%

ICU Level of Service B

Splits and Phases: 3: 228th ST SE - 35th to 45th & 45th Ave SE













 ø2	 ø4
33.5 s	16.5 s
 ø6	 ø8
33.5 s	16.5 s

HCM Unsignalized Intersection Capacity Analysis
30: SR522 WB Ramps & SR9

Future Volumes with Brightwater
PM Peak-Hour



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↰	↱	↰	↑	↑	↱
Sign Control	Stop			Free	Free	
Grade	-3%			-5%	5%	
Volume (veh/h)	38	66	32	1137	413	358
Peak Hour Factor	0.82	0.82	0.97	0.97	0.79	0.79
Hourly flow rate (veh/h)	46	80	33	1172	523	453
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage veh						
Upstream signal (ft)	500					
pX, platoon unblocked	0.72					
vC, conflicting volume	1761	523	976			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2064	523	976			
tC, single (s)	6.5	6.3	4.1			
tC, 2 stage (s)						
tF (s)	3.6	3.4	2.2			
p0 queue free %	0	85	95			
cM capacity (veh/h)	39	543	695			
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	SB 1	SB 2
Volume Total	46	80	33	1172	523	453
Volume Left	46	0	33	0	0	0
Volume Right	0	80	0	0	0	453
cSH	39	543	695	1700	1700	1700
Volume to Capacity	1.17	0.15	0.05	0.69	0.31	0.27
Queue Length (ft)	115	13	4	0	0	0
Control Delay (s)	358.3	12.8	10.4	0.0	0.0	0.0
Lane LOS	F	B	B			
Approach Delay (s)	139.0		0.3		0.0	
Approach LOS	F					
Intersection Summary						
Average Delay	7.8					
Intersection Capacity Utilization	71.7%					
ICU Level of Service	C					

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	-3%			5%	-5%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	1	1			1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50	50	50	50	50
Trailing Detector (ft)	0	0	0	0	0	0
Turning Speed (mph)	15	9	15			9
Satd. Flow (prot)	1696	1518	1676	1764	1820	1547
Flt Permitted	0.950		0.950			
Satd. Flow (perm)	1696	1518	1676	1764	1820	1547
Right Turn on Red		Yes				Yes
Satd. Flow (RTOR)		68				80
Link Speed (mph)	30			45	45	
Link Distance (ft)	500			2850	500	
Travel Time (s)	11.4			43.2	7.6	
Volume (vph)	563	67	172	668	458	66
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.96	0.96	0.95	0.95	0.83	0.83
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	8%	8%	5%	5%	7%	7%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Lane Group Flow (vph)	586	70	181	703	552	80
Turn Type		Perm	Prot			Perm
Protected Phases	4		5	2	6	
Permitted Phases		4				6
Total Split (s)	34.0	34.0	17.0	66.0	49.0	49.0
Act Effct Green (s)	30.3	30.3	12.9	49.9	33.0	33.0
Actuated g/C Ratio	0.34	0.34	0.15	0.57	0.37	0.37
v/c Ratio	1.01	0.12	0.74	0.71	0.81	0.13
Uniform Delay, d1	29.0	0.5	36.0	13.8	24.8	0.0
Delay	73.8	7.0	50.2	13.8	24.1	3.5
LOS	E	A	D	B	C	A
Approach Delay	66.7			21.3	21.5	
Approach LOS	E			C	C	
Queue Length 50th (ft)	~335	1	98	260	255	0
Queue Length 95th (ft)	#652	33	#232	380	305	14
Internal Link Dist (ft)	420			2770	420	
50th Up Block Time (%)						
95th Up Block Time (%)	40%					
Turn Bay Length (ft)						
50th Bay Block Time %						
95th Bay Block Time %						
Queuing Penalty (veh)						

Intersection Summary

Area Type: Other

Cycle Length: 100

Actuated Cycle Length: 88.3

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.01

Intersection Signal Delay: 35.1

Intersection LOS: D

Intersection Capacity Utilization 81.6%

ICU Level of Service D

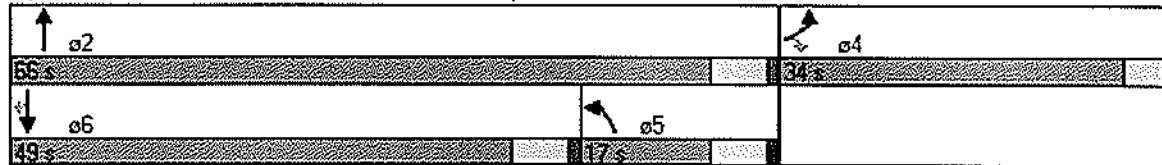
- Volume exceeds capacity, queue is theoretically infinite.























Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 32: SR 522 EB Ramps & SR9











												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		1%			-1%			1%			-1%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	1		1	1		1
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	100	250		100	250		100	250	100	100	250	100
Trailing Detector (ft)	0	0		0	0		0	0	0	0	0	0
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1761	*136	0	1778	1737	0	1761	1853	1575	1744	1836	1561
Flt Permitted	0.640			0.331			0.378			0.080		
Satd. Flow (perm)	1186	1583	0	620	1737	0	701	1853	1575	147	1836	1561
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		136			13				5			82
Link Speed (mph)		32			35			45			45	
Link Distance (ft)		2112			1000			1780			5290	
Travel Time (s)		45.0			19.5			27.0			80.2	
Volume (vph)	145	4	144	25	10	9	147	990	10	4	470	76
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.81	0.81	0.81	0.70	0.70	0.70	0.95	0.95	0.95	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	179	183	0	36	27	0	155	1042	11	4	522	84
Turn Type	pm+pt			pm+pt			pm+pt		Perm	pm+pt		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4			8			2		2	6		6
Total Split (s)	19.6	29.6	0.0	14.6	29.6	0.0	24.6	146.0	146.0	24.6	146.0	146.0
Act Effct Green (s)	34.8	0.0		16.3	12.5		87.7	86.5	86.5	79.2	73.9	73.9
Actuated g/C Ratio	0.26	0.00		0.12	0.09		0.67	0.66	0.66	0.57	0.56	0.56
v/c Ratio	0.43	1.35		0.27	0.16		0.29	0.85	0.01	0.03	0.51	0.09
Uniform Delay, d1	40.3	0.0		39.0	30.9		8.2	21.2	5.1	8.0	17.5	0.3
Delay	49.3	165.9		52.2	43.7		7.2	17.2	5.8	7.8	16.1	2.3
LOS	D	F		D	D		A	B	A	A	B	A
Approach Delay		108.2			48.6			15.8			14.1	
Approach LOS		F			D			B			B	
Queue Length 50th (ft)	126	~85		23	11		45	631	2	1	261	1
Queue Length 95th (ft)	268	#239		61	38		73	1064	9	5	373	21
Internal Link Dist (ft)		2032			920			1700			5210	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary

Area Type: Other
Cycle Length: 219.8
Actuated Cycle Length: 131.5
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 1.35
Intersection Signal Delay: 31.2 Intersection LOS: C
Intersection Capacity Utilization 84.8% ICU Level of Service D
* User Entered Value
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: 228th ST SE - 45 to SR9 & SR9

 ø1	 ø2	 ø3	 ø4
24.6 s	146 s	14.6 s	29.6 s
 ø5	 ø6	 ø7	 ø8
24.6 s	146 s	19.6 s	29.6 s

Lanes, Volumes, Timings
25: Maltby Rd & SR9 - N of SR524







Future Volumes with Brightwater
PM Peak-Hour

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↰	↷			↷		↰	↷		↰	↷	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	150		0	0		0	300		0	150		0
Storage Lanes	1		0	0		0	1		0	1		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		50	50		50	50		50	50	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1770	1798	0	0	1815	0	1770	1842	0	1736	1803	0
Flt Permitted	0.950				0.993		0.950			0.950		
Satd. Flow (perm)	1770	1798	0	0	1815	0	1770	1842	0	1736	1803	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		12			7			5			6	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		2929			3076			5290			1234	
Travel Time (s)		57.1			59.9			80.2			18.7	
Volume (vph)	95	143	44	36	183	35	148	923	71	19	384	36
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.95	0.95	0.95	0.81	0.81	0.81	0.95	0.95	0.95	0.87	0.87	0.87
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	4%	4%	4%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	100	197	0	0	313	0	156	1047	0	22	482	0
Turn Type	Split			Split			Prot			Prot		
Protected Phases	4	4		8	8		5	2		1	6	
Permitted Phases												
Total Split (s)	14.5	14.5	0.0	22.5	22.5	0.0	19.0	47.0	0.0	16.0	44.0	0.0
Act Effct Green (s)	10.6	10.6			18.0		13.9	44.7		12.0	32.6	
Actuated g/C Ratio	0.12	0.12			0.20		0.15	0.49		0.12	0.36	
v/c Ratio	0.49	0.90			0.86		0.58	1.16		0.11	0.74	
Uniform Delay, d1	39.7	39.2			36.6		37.9	24.9		42.5	24.2	
Delay	40.8	76.2			51.9		38.0	97.6		40.3	25.7	
LOS	D	E			D		D	F		D	C	
Approach Delay		64.3			51.9			89.9			26.4	
Approach LOS		E			D			F			C	
Queue Length 50th (ft)	55	107			170		83	~652		11	243	
Queue Length 95th (ft)	115	#265			#297		160	#1119		35	341	
Internal Link Dist (ft)		2849			2996			5210			1154	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)	150						300			150		
50th Bay Block Time %								29%			29%	
95th Bay Block Time %		49%						59%			36%	
Queuing Penalty (veh)		24						68			7	

Intersection Summary


Area Type: Other
 Cycle Length: 100
 Actuated Cycle Length: 91.2
 Control Type: Actuated-Uncoordinated
 Maximum v/c Ratio: 1.16
 Intersection Signal Delay: 67.7 Intersection LOS: E
 Intersection Capacity Utilization 105.0% ICU Level of Service F
 ~ Volume exceeds capacity, queue is theoretically infinite.
 Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

Splits and Phases: 25: Maltby Rd & SR9 - N of SR524

 α2	 α1	 α4	 α8
47 s	16 s	14.5 s	22.5 s
 α5	 α6		
19 s	44 s		

Lanes, Volumes, Timings
3: 228th ST SE - 35th to 45th & 45th Ave SE

Future Volumes with Brightwater
PM Peak-Hour

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		0	0		0	0		0
Storage Lanes	1		0	1		0	0		0	0		0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Leading Detector (ft)	50	50		100	50		50	250		100	250	
Trailing Detector (ft)	0	0		0	0		0	0		0	0	
Turning Speed (mph)	15		9	15		9	15		9	15		9
Satd. Flow (prot)	1736	1783	0	1770	1827	0	0	1791	0	0	1747	0
Flt Permitted	0.376			0.441				0.805			0.860	
Satd. Flow (perm)	687	1783	0	821	1827	0	0	1474	0	0	1523	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		31			24			20			41	
Link Speed (mph)		35			35			30			30	
Link Distance (ft)		2000			1320			1000			1500	
Travel Time (s)		39.0			25.7			22.7			34.1	
Volume (vph)	57	313	59	17	409	61	132	125	36	22	27	28
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.89	0.89	0.89	0.97	0.97	0.97	0.91	0.91	0.91	0.69	0.69	0.69
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Lane Group Flow (vph)	64	418	0	18	485	0	0	322	0	0	112	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		2			6			8			4	
Permitted Phases	2			6			8			4		
Total Split (s)	22.0	22.0	0.0	22.0	22.0	0.0	18.0	18.0	0.0	18.0	18.0	0.0
Act Effect Green (s)	15.1	15.1		15.1	15.1			12.5			12.5	
Actuated g/C Ratio	0.42	0.42		0.42	0.42			0.35			0.35	
v/c Ratio	0.22	0.54		0.05	0.62			0.61			0.20	
Uniform Delay, d1	6.5	7.0		6.1	7.5			8.8			4.9	
Delay	7.4	7.7		6.5	8.3			10.5			6.5	
LOS	A	A		A	A			B			A	
Approach Delay		7.7			8.2			10.5			6.5	
Approach LOS		A			A			B			A	
Queue Length 50th (ft)	8	54		2	67			44			9	
Queue Length 95th (ft)	25	108		9	134			#120			23	
Internal Link Dist (ft)		1920			1240			920			1420	
50th Up Block Time (%)												
95th Up Block Time (%)												
Turn Bay Length (ft)												
50th Bay Block Time %												
95th Bay Block Time %												
Queuing Penalty (veh)												

Intersection Summary

Area Type: Other

Cycle Length: 40

Actuated Cycle Length: 35.7

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.62

Intersection Signal Delay: 8.4

Intersection LOS: A

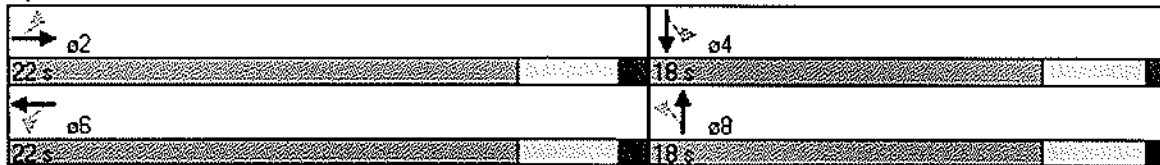
Intersection Capacity Utilization 68.7%

ICU Level of Service B

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 3: 228th ST SE - 35th to 45th & 45th Ave SE



Attachment D

WASHINGTON STATE DEPT OF TRANSPORTATION

PAGE: 1
FILE: 01398PH1
DATE: 5/04/00

Site Code : 52213963
LOCATION : SR 522 WB RAMP
JCT : SR 9
MILEPOST : 13.96

Movements by: Primary

Time	From South			From West			From North			From East			Vehicle
Begin	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	Total
3:30	0	225	5	16	0	2	102	86	0	0	0	0	436
3:45	0	270	4	19	0	1	102	88	0	0	0	0	484
HR TOTAL	0	495	9	35	0	3	204	174	0	0	0	0	920
4:00 PM	0	250	8	7	0	2	98	80	0	0	0	0	445
4:15	0	196	5	9	0	1	91	81	0	0	0	0	383
4:30	0	199	10	18	0	2	83	88	0	0	0	0	400
4:45	0	198	7	11	0	0	60	105	0	0	0	0	381
HR TOTAL	0	843	30	45	0	5	332	354	0	0	0	0	1609
5:00 PM	0	167	9	14	0	3	65	97	0	0	0	0	355
5:15	0	165	8	15	0	1	71	84	0	0	0	0	344
5:30	0	187	7	14	0	0	70	67	0	0	0	0	345
5:45	0	237	4	13	0	1	67	62	0	0	0	0	384
HR TOTAL	0	756	28	56	0	5	273	310	0	0	0	0	1428

DAY TOTAL 0 2094 67 136 0 13 809 838 0 0 0 0 0 3957

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:30 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES			PERCENTS		
			Right	Thru	Left	Right	Thru	Left
South	3:30 PM	0.88	0	941	22	0	98	2
West	4:30 PM	0.80	58	0	6	91	0	9
North	3:30 PM	0.96	393	335	0	54	46	0
East	3:30 PM	0.00	0	0	0	0	0	0
Entire Intersection								
South	3:30 PM	0.88	0	941	22	0	98	2
West		0.71	51	0	6	89	0	11
North		0.96	393	335	0	54	46	0
East		0.00	0	0	0	0	0	0

3

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 52213963
 LOCATION : SR 522 EB RAMPS
 JCT : SR 9
 MILEPOST : 13.96
 DATE: 5/01/00
 PAGE: 1
 FILE: 01396PM

Movements by: Primary

Time Begin	From South			From West			From North			From East			Vehicle Total
	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
3:30	0	149	32	16	0	139	8	114	0	0	0	0	458
3:45	0	126	21	13	0	134	4	95	0	0	0	0	393
HR TOTAL	0	275	53	29	0	273	12	209	0	0	0	0	851
4:00 PM	0	103	25	20	0	129	12	82	0	0	0	0	371
4:15	0	96	12	15	0	113	3	77	0	0	0	0	316
4:30	0	121	17	7	0	94	9	97	0	0	0	0	345
4:45	0	90	11	15	0	82	6	83	0	0	0	0	287
HR TOTAL	0	410	65	57	0	418	30	339	0	0	0	0	1319
5:00 PM	0	89	28	6	0	101	5	91	0	0	0	0	320
5:15	0	90	19	10	0	119	6	92	0	0	0	0	336
5:30	0	118	16	10	0	95	2	90	0	0	0	0	331
5:45	0	77	13	11	0	118	7	69	0	0	0	0	295
HR TOTAL	0	374	76	37	0	433	20	342	0	0	0	0	1282

DAY TOTAL 0 1059 194 123 0 1124 62 890 0 0 0 0 0 3452

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:30 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES			PERCENTS		
			Right	Thru	Left	Right	Thru	Left
South	3:30 PM	0.78	0	474	90	0	84	16
West	3:30 PM	0.93	64	0	515	11	0	89
North	3:30 PM	0.81	27	368	0	7	93	0
East	3:30 PM	0.00	0	0	0	0	0	0
Entire Intersection								
South	3:30 PM	0.78	0	474	90	0	84	16
West	3:30 PM	0.93	64	0	515	11	0	89
North	3:30 PM	0.81	27	368	0	7	93	0
East	3:30 PM	0.00	0	0	0	0	0	0

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 52213961
 LOCATION : SR 9 - WOOD/SNOHOMISH RD
 JCT : SR 522 EB RAMPS
 MILEPOST : 0.00

PAGE: 1
 FILE: 00000AM
 DATE: 6/19/02

Movements by: Primary

Time Begin	From East			From South			From West			From North			Vehicle Total
	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
6:30	0	0	0	0	45	4	10	0	60	3	168	0	290
6:45	0	0	0	0	51	4	11	0	63	4	173	0	306
HR TOTAL	0	0	0	0	96	8	21	0	123	7	341	0	596
7:00 AM	0	0	0	0	82	8	12	0	57	4	176	0	339
7:15	0	0	0	0	63	7	11	0	69	5	165	0	320
7:30	0	0	0	0	67	10	21	0	47	11	187	0	343
7:45	0	0	0	0	71	8	11	0	56	4	182	0	332
HR TOTAL	0	0	0	0	283	33	55	0	229	24	710	0	1334
8:00 AM	0	0	0	0	61	9	20	0	59	3	149	0	301
8:15	0	0	0	0	59	16	12	0	53	4	141	0	285
DAY TOTAL	0	0	0	0	499	66	108	0	464	38	1341	0	2516

PEAK PERIOD ANALYSIS FOR THE PERIOD: 6:30 AM - 8:30 AM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	..... VOLUMES .....				.... PERCENTS		
			Right	Thru	Left	Total	Right	Thru	Left
East	12:00 AM	0.00	0	0	0	0	0	0	0
South	7:00 AM	0.88	0	283	33	316	0	90	10
West	7:15 AM	0.92	63	0	231	294	21	0	79
North	7:00 AM	0.93	24	710	0	734	3	97	0

Entire Intersection

East	7:00 AM	0.00	0	0	0	0	0	0	0
South		0.88	0	283	33	316	0	90	10
West		0.89	55	0	229	284	19	0	81
North		0.93	24	710	0	734	3	97	0

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 52213963

LOCATION : SR 9 - WOOD/SNOHOMISH RD

JCT : SR 522 EB RAMP

MILEPOST : 0.00

PAGE: 1

FILE: 00000PM

Movements by: Primary

DATE: 6/19/02

Time Begin	From East			From South			From West			From North			Vehicle Total
	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
3:30	0	0	0	0	138	40	16	0	148	11	99	0	452
3:45	0	0	0	0	152	38	11	0	145	18	133	0	497
HR TOTAL	0	0	0	0	290	78	27	0	293	29	232	0	949
4:00 PM	0	0	0	0	134	38	21	0	135	14	104	0	446
4:15	0	0	0	0	144	38	11	0	145	13	111	0	462
4:30	0	0	0	0	140	51	20	0	121	14	96	0	442
4:45	0	0	0	0	127	47	14	0	104	11	93	0	396
HR TOTAL	0	0	0	0	545	174	66	0	505	52	404	0	1746
5:00 PM	0	0	0	0	128	41	16	0	132	7	104	0	428
5:15	0	0	0	0	119	29	25	0	128	12	100	0	413
5:30	0	0	0	0	131	29	9	0	105	5	96	0	375
5:45	0	0	0	0	125	32	12	0	112	8	98	0	387
HR TOTAL	0	0	0	0	503	131	62	0	477	32	398	0	1603

DAY TOTAL	0	0	0	0	1338	383	155	0	1275	113	1034	0	4298
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PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:30 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES				PERCENTS		
			Right	Thru	Left	Total	Right	Thru	Left
East	12:00 AM	0.00	0	0	0	0	0	0	0
South	3:45 PM	0.96	0	570	165	735	0	78	22
West	3:30 PM	0.96	59	0	573	632	9	0	91
North	3:30 PM	0.83	56	447	0	503	11	89	0
Entire Intersection									
East	3:30 PM	0.00	0	0	0	0	0	0	0
South		0.95	0	568	154	722	0	79	21
West		0.96	59	0	573	632	9	0	91
North		0.83	56	447	0	503	11	89	0

~~5002 AM Peak~~

AM PEAK NOT GIVE
SD,
MANUAL ESTIMATE

SR 9

SR 522 WB

✓ 50
✓ 136

810 586

83 ~~575~~
429

SR 522 EB

229
55

24 710

33 283

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 52213963
 LOCATION : SR 9
 JCT : SR 522 WB RAMPS
 MILEPOST : 0.09

PAGE: 1
 FILE: 000099PM

Movements by: Primary

DATE: 2/11/02

Time Begin	From East			From South			From West			From North			Vehicle Total
	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
3:30	0	0	0	0	260	11	18	0	3	122	114	0	528
3:45	0	0	0	0	267	10	17	0	4	72	94	0	464
HR TOTAL	0	0	0	0	527	21	35	0	7	194	208	0	992
4:00 PM	0	0	0	0	253	6	10	0	5	77	100	0	451
4:15	0	0	0	0	267	5	21	0	4	86	84	0	467
4:30	0	0	0	0	258	6	16	0	1	91	103	0	475
4:45	0	0	0	0	241	11	15	0	1	72	100	0	440
HR TOTAL	0	0	0	0	1019	28	62	0	11	326	387	0	1833
5:00 PM	0	0	0	0	196	4	10	0	2	74	84	0	370
5:15	0	0	0	0	237	8	14	0	3	61	90	0	413
5:30	0	0	0	0	249	9	16	0	1	67	79	0	421
5:45	0	0	0	0	241	7	12	0	1	63	80	0	404
HR TOTAL	0	0	0	0	923	28	52	0	7	265	333	0	1608
DAY TOTAL	0	0	0	0	2469	77	149	0	25	785	928	0	4433

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:30 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	..... VOLUMES .....				.... PERCENTS		
			Right	Thru	Left	Total	Right	Thru	Left
East	12:00 AM	0.00	0	0	0	0	0	0	0
South	3:30 PM	0.97	0	1047	32	1079	0	97	3
West	3:30 PM	0.82	66	0	16	82	80	0	20
North	3:30 PM	0.79	357	392	0	749	48	52	0
Entire Intersection									
East	3:30 PM	0.00	0	0	0	0	0	0	0
South		0.97	0	1047	32	1079	0	97	3
West		0.82	66	0	16	82	80	0	20
North		0.79	357	392	0	749	48	52	0

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 00090571
 LOCATION : SR 9
 JCT : 228TH ST SE
 MILEPOST : 0.57

PAGE: 1
 FILE: 00057AM

Movements by: Primary

DATE: 4/04/02

Time Begin	From West			From North			From East			From South			Vehicle Total
	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
6:30	43	1	6	18	294	3	0	0	1	2	76	6	450
6:45	61	2	15	32	299	5	0	0	3	11	62	19	509
HR TOTAL	104	3	21	50	593	8	0	0	4	13	138	25	959
7:00 AM	51	0	11	38	283	3	0	0	0	11	54	13	464
7:15	74	0	11	26	292	1	0	0	0	3	65	20	492
7:30	79	2	15	33	267	3	0	0	1	6	70	24	500
7:45	51	1	21	32	269	1	0	0	2	5	105	18	505
HR TOTAL	255	3	58	129	1111	8	0	0	3	25	294	75	1961
8:00 AM	48	1	9	26	281	3	1	1	2	4	71	30	477
8:15	45	2	10	27	247	1	1	0	2	4	79	17	435
DAY TOTAL	452	9	98	232	2232	20	2	1	11	46	582	147	3832

PEAK PERIOD ANALYSIS FOR THE PERIOD: 6:30 AM - 8:30 AM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	..... VOLUMES .....				..... PERCENTS		
			Right	Thru	Left	Total	Right	Thru	Left
West	6:45 AM	0.84	265	4	52	321	83	1	16
North	6:30 AM	0.96	114	1168	12	1294	9	90	1
East	7:30 AM	0.63	2	1	7	10	20	10	70
South	7:30 AM	0.85	19	325	89	433	4	75	21
Entire Intersection									
West	7:15 AM	0.81	252	4	56	312	81	1	18
North		0.97	117	1109	8	1234	9	90	1
East		0.44	1	1	5	7	14	14	71
South		0.82	18	311	92	421	4	74	22

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 00090573
 LOCATION : SR-9
 JCT : 228TH ST SE
 MILEPOST : 0.57

PAGE: 1
 FILE: 00057PM

Movements by: Primary

DATE: 4/04/02

Time Begin	From West			From North			From East			From South			Vehicle Total
	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
3:30	33	2	37	24	144	2	2	3	5	10	217	29	508
3:45	51	3	39	28	149	0	0	1	2	3	224	29	529
HR TOTAL	84	5	76	52	293	2	2	4	7	13	441	58	1037
4:00 PM	34	0	35	19	116	1	1	1	7	4	190	35	443
4:15	43	0	26	17	140	0	0	2	4	3	216	46	497
4:30	39	3	42	13	97	2	0	9	8	2	202	26	443
4:45	38	3	39	25	116	0	0	2	5	1	213	25	467
HR TOTAL	154	6	142	74	469	3	1	14	24	10	821	132	1850
5:00 PM	34	4	37	22	101	0	0	6	5	1	227	32	469
5:15	31	2	32	21	105	1	0	7	8	0	228	31	466
5:30	29	0	30	25	110	0	0	3	3	1	218	22	441
5:45	35	1	38	19	101	1	1	1	4	0	225	29	455
HR TOTAL	129	7	137	87	417	2	1	17	20	2	898	114	1831
DAY TOTAL	367	18	355	213	1179	7	4	35	51	25	2160	304	4718

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:30 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES				PERCENTS		
			Right	Thru	Left	Total	Right	Thru	Left
West	3:45 PM	0.85	167	6	142	315	53	2	45
North	3:30 PM	0.90	88	549	3	640	14	86	0
East	4:30 PM	0.74	0	24	26	50	0	48	52
South	5:00 PM	0.98	2	898	114	1014	0	89	11

Entire Intersection

West	3:30 PM	0.81	161	5	137	303	53	2	45
North		0.90	88	549	3	640	14	86	0
East		0.70	3	7	18	28	11	25	64
South		0.95	20	847	139	1006	2	84	14

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 00091571
 LOCATION : SR 9
 JCT : SR 524
 MILEPOST : 1.57

PAGE: 1
 FILE: 00157AM

Movements by: Primary

DATE: 4/09/02

Time Begin	From East			From South			From West			From North			Vehicle Total
	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
6:30	5	29	11	8	44	12	46	34	7	7	222	2	427
6:45	7	23	24	13	45	9	49	35	10	18	197	1	431
HR TOTAL	12	52	35	21	89	21	95	69	17	25	419	3	858
7:00 AM	4	39	32	12	29	2	34	40	11	9	220	3	435
7:15	8	28	15	4	58	9	33	25	5	14	230	0	429
7:30	7	34	20	13	46	5	39	32	7	8	213	1	425
7:45	7	30	20	10	53	6	36	37	2	9	205	3	418
HR TOTAL	26	131	87	39	186	22	142	134	25	40	868	7	1707
8:00 AM	5	29	16	11	37	17	47	25	10	13	202	2	414
8:15	2	19	14	9	47	11	34	30	10	13	220	4	413
DAY TOTAL	45	231	152	80	359	71	318	258	62	91	1709	16	3392

PEAK PERIOD ANALYSIS FOR THE PERIOD: 6:30 AM - 8:30 AM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES				PERCENTS		
			Right	Thru	Left	Total	Right	Thru	Left
East	7:00 AM	0.81	26	131	87	244	11	54	36
South	7:15 AM	0.95	38	194	37	269	14	72	14
West	6:30 AM	0.88	162	134	33	329	49	41	10
North	6:30 AM	0.95	48	869	6	923	5	94	1
Entire Intersection									
East	6:30 AM	0.75	24	119	82	225	11	53	36
South		0.86	37	176	32	245	15	72	13
West		0.88	162	134	33	329	49	41	10
North		0.95	48	869	6	923	5	94	1

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 00901573
 LOCATION : SR 9
 CT : SR 524/MALBY RD
 ILEPOST : 1.57

PAGE: 1
 FILE: 00157PM

Movements by: Primary

DATE: 3/18/02

Time Begin	From North			From East			From South			From West			Vehicle Total
	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
3:30	8	84	2	7	44	15	13	205	32	13	21	16	460
3:45	9	83	7	10	37	11	14	206	28	19	53	23	500
HR TOTAL	17	167	9	17	81	26	27	411	60	32	74	39	960
4:00 PM	7	68	4	9	41	12	17	214	21	10	24	28	455
4:15	7	66	7	6	43	6	23	205	22	11	38	20	454
4:30	11	89	4	5	48	7	20	210	34	16	33	17	494
4:45	8	97	5	9	42	5	14	210	39	10	38	21	498
HR TOTAL	33	320	20	29	174	30	74	839	116	47	133	86	1901
5:00 PM	6	67	4	12	50	14	12	231	34	11	32	22	495
5:15	6	84	3	2	43	10	20	203	30	6	40	16	463
5:30	13	77	4	9	50	15	14	177	16	5	33	22	435
5:45	6	74	4	5	31	7	8	199	28	18	31	24	435
HR TOTAL	31	302	15	28	174	46	54	810	108	40	136	84	1828

DAY TOTAL	81	789	44	74	429	102	155	2060	284	119	343	209	4689
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PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:30 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES				PERCENTS		
			Right	Thru	Left	Total	Right	Thru	Left
North	4:30 PM	0.87	31	337	16	384	8	88	4
East	4:45 PM	0.86	32	185	44	261	12	71	17
South	4:30 PM	0.95	66	854	137	1057	6	81	13
West	3:45 PM	0.77	56	148	88	292	19	51	30

Entire Intersection

North	4:30 PM	0.87	31	337	16	384	8	88	4
East		0.81	28	183	36	247	11	74	15
South		0.95	66	854	137	1057	6	81	13
West		0.95	43	143	76	262	16	55	29

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 00093761
 LOCATION : SR 9
 ICT : 180TH ST SE
 FILEPOST : 3.76

PAGE: 1
 FILE: 00376AM

Movements by: Primary

DATE: 4/10/02

Time Begin	From North			From East			From South			From West			Vehicle Total
	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
6:45	5	27	10	1	44	2	12	30	13	56	203	19	422
7:00 AM	16	22	7	3	53	6	14	20	9	66	192	17	425
7:15	9	45	5	6	59	10	13	38	14	63	192	28	482
7:30	6	27	10	5	52	8	8	37	12	52	190	27	434
7:45	17	29	10	3	51	10	15	31	5	48	171	19	409
HR TOTAL	48	123	32	17	215	34	50	126	40	229	745	91	1750
8:00 AM	16	31	8	4	60	6	16	20	8	29	176	15	389
8:15	12	21	10	3	61	7	9	19	7	37	181	18	385
DAY TOTAL	81	202	60	25	380	49	87	195	68	351	1305	143	2946

PEAK PERIOD ANALYSIS FOR THE PERIOD: 6:45 AM - 8:30 AM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	..... VOLUMES .....				..... PERCENTS		
			Right	Thru	Left	Total	Right	Thru	Left
North	7:15 AM	0.90	48	132	33	213	23	62	15
East	7:15 AM	0.91	18	222	34	274	7	81	12
South	6:45 AM	0.85	47	125	48	220	21	57	22
West	6:45 AM	0.98	237	777	91	1105	21	70	8

Entire Intersection

North	6:45 AM	0.80	36	121	32	189	19	64	17
East		0.83	15	208	26	249	6	84	10
South		0.85	47	125	48	220	21	57	22
West		0.98	237	777	91	1105	21	70	8

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 00093763
 LOCATION : SR 9
 ICT : 180TH ST SE
 MILEPOST : 3.76

PAGE: 1
 FILE: 00376PM

Movements by: Primary

DATE: 4/17/02

Time Begin	From East			From South			From West			From North			Vehicle Total
	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
3:30	32	43	6	8	198	18	10	33	26	13	125	15	527
3:45	22	31	6	10	215	15	10	27	11	20	113	35	515
HR TOTAL	54	74	12	18	413	33	20	60	37	33	238	50	1042
4:00 PM	19	43	10	10	190	19	11	37	24	26	104	26	519
4:15	22	34	11	9	217	17	10	31	22	18	109	17	517
4:30	24	39	8	16	218	26	9	31	24	25	97	17	534
4:45	24	33	7	11	209	18	7	33	28	24	89	22	505
HR TOTAL	89	149	36	46	834	80	37	132	98	93	399	82	2075
5:00 PM	24	43	12	8	200	25	12	41	25	18	90	15	513
5:15	26	36	7	8	203	11	8	36	23	29	93	16	496
5:30	22	38	9	5	212	23	3	32	22	19	95	24	504
5:45	17	32	7	9	193	21	8	26	15	23	92	19	462
HR TOTAL	89	149	35	30	808	80	31	135	85	89	370	74	1975

DAY TOTAL	232	372	83	94	2055	193	88	327	220	215	1007	206	5092
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PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:30 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	VOLUMES				PERCENTS		
			Right	Thru	Left	Total	Right	Thru	Left
East	4:30 PM	0.90	98	151	34	283	35	53	12
South	4:15 PM	0.94	44	844	86	974	5	87	9
West	4:30 PM	0.89	36	141	100	277	13	51	36
North	3:30 PM	0.92	77	451	93	621	12	73	15
Entire Intersection									
East	3:45 PM	0.93	87	147	35	269	32	55	13
South		0.93	45	840	77	962	5	87	8
West		0.86	40	126	81	247	16	51	33
North		0.90	89	423	95	607	15	70	16

Vehicular Turning Movement

Peak-Hour

February 11, 2003

SR 9 & 228th Street SE

SOUTHBOUND

Total: 1551
PHF:
% Truck:

Right	Thru	Left
70	430	2

RESULTS: Peak-Hour 4-5 PM

WESTBOUND

Total: 473
PHF:
% Truck:

Left	132
Thru	6
Right	130

3	Right	Total:	68
20	Thru	PHF:	
28	Left	% Truck:	

EASTBOUND

Left	Thru	Right
115	914	9

Total: 1626
PHF:
% Truck:

NORTHBOUND

Important Note: Peak-Hour Sum is 4:00 PM to 5:00 PM based on intersection count of SR 9 & 228th Street SE performed on February 11, 2003.

Active Excavators				Woody's				IN				OUT				IN				OUT				IN				OUT			
Period	SBL	WBR	WBL	NBR	Period	Hour	SBL	WBR	WBL	NBR	Period	Hour	SBL	WBR	WBL	NBR	Period	Hour	SBL	WBR	WBL	NBR	Period	Hour	SBL	WBR	WBL	NBR	Period	Hour	
1	1	5	1	2	9		0	1	0	1	1		0	1	0	1	2		0	1	0	1	2		0	1	0	1	2		
2	0	1	2	1	4		1	1	1	1	2		1	0	2	1	1	4		1	0	2	1	4		1	0	2	1	4	
3	0	4	2	0	6		0	4	2	0	3		1	0	2	1	1	4		1	0	2	1	4		1	0	2	1	4	
4	1	4	3	0	8	27	0	4	3	0	4		0	0	1	0	1	11		0	0	1	0	1		0	0	1	0	11	
5	0	4	0	0	4	22	0	0	0	0	5		0	2	0	2	4	13		0	2	0	2	5		0	2	0	2	13	
6	0	0	0	0	0	18	0	0	0	0	6		0	1	2	2	14		0	1	2	2	5		0	1	2	2	14		
7	0	1	0	0	1	13	0	1	0	0	7		0	2	1	1	1	14		0	2	1	1	4		0	2	1	1	14	
8	0	1	0	0	1	6	0	1	0	0	8		0	0	0	0	0	13		0	0	0	0	0		0	0	0	0	13	
Peak-Hour Sum	1	12	5	0	19		1	12	5	0	Peak-Hour Sum		1	3	5	5	5	19		1	3	5	5	19		1	3	5	5	19	

Wild West Mustang Ranch				Insurance Auto Auctions				OUT				IN			
Period	SBL	WBR	NBR	Period	Hour	WBR	NBR	Period	Hour	WBR	NBR	Period	Hour		
1	0	2	1	4		0	3	6		0	3	6			
2	0	0	2	3		1	4	8		1	4	8			
3	0	0	0	1		1	0	6		0	2	6			
4	0	0	0	0	8	1	2	5		1	2	5	25		
5	0	0	1	1	5	0	2	7		2	1	7	26		
6	0	1	0	2	4	0	5	9		2	2	9	27		
7	0	2	0	2	5	0	0	3		0	0	3	24		
8	0	0	0	1	6	0	2	4		0	2	4	23		
Peak-Hour Sum	0	1	2	4		2	8	27		2	10	27			

CT Sales				Fitz Auto Parts (Retail&Yard)				Peak-Hour Sum			
IN	OUT	IN	Hour	IN	OUT	IN	Hour	IN	OUT	IN	Hour
SBL	WBL	NBR	Period	SBL	WBL	NBR	Period	SBL	WBL	NBR	Period
0	0	1	1	2	5	8	1	2	5	8	19
0	0	0	2	1	4	5	2	1	5	5	15
0	1	1	3	0	3	4	3	0	3	4	12
0	2	0	4	1	3	7	4	1	3	7	13
0	0	0	5	3	3	5	5	3	3	5	15
0	0	0	6	0	6	10	6	0	6	10	22
0	0	0	7	0	12	1	7	0	12	1	24
0	0	0	8	1	5	2	8	1	5	2	13
0	1	1	Sum	4	15	26	62	4	17	26	62

Peak-Hour Totals	IN	OUT	IN
	SBL	WBL	NBR
	8	44	37
			43

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 52213963
 LOCATION : SR 9
 JCT : SR 522 WB RAMPS
 MILEPOST : 0.09

PAGE: 1
 FILE: 00009PH
 DATE: 2/11/02

Movements by: Primary

Time Begin	From East			From South			From West			From North			Vehicle Total
	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
3:30	0	0	0	0	260	11	18	0	3	122	114	0	528
3:45	0	0	0	0	267	10	17	0	4	72	94	0	464
HR TOTAL	0	0	0	0	527	21	35	0	7	194	208	0	992
4:00 PM	0	0	0	0	253	6	10	0	5	77	100	0	451
4:15	0	0	0	0	267	5	21	0	4	86	84	0	467
4:30	0	0	0	0	258	6	16	0	1	91	103	0	475
4:45	0	0	0	0	241	11	15	0	1	72	100	0	440
HR TOTAL	0	0	0	0	1019	28	62	0	11	326	387	0	1833
5:00 PM	0	0	0	0	196	4	10	0	2	74	84	0	370
5:15	0	0	0	0	237	8	14	0	3	61	90	0	413
5:30	0	0	0	0	249	9	16	0	1	67	79	0	421
5:45	0	0	0	0	241	7	12	0	1	63	80	0	404
HR TOTAL	0	0	0	0	923	28	52	0	7	265	333	0	1608
DAY TOTAL	0	0	0	0	2469	77	149	0	25	785	928	0	4433

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:30 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	..... VOLUMES .....				.... PERCENTS ...		
			Right	Thru	Left	Total	Right	Thru	Left
East	12:00 AM	0.00	0	0	0	0	0	0	0
South	3:30 PM	0.97	0	1047	32	1079	0	97	3
West	3:30 PM	0.82	66	0	16	82	80	0	20
North	3:30 PM	0.79	357	392	0	749	48	52	0
Entire Intersection									
East	3:30 PM	0.00	0	0	0	0	0	0	0
South		0.97	0	1047	32	1079	0	97	3
West		0.82	66	0	16	82	80	0	20
North		0.79	357	392	0	749	48	52	0

WASHINGTON STATE DEPT OF TRANSPORTATION

File Code : 52213963
 LOCATION : SR 9 - WOOD/SHOHOMISH RD
 : SR 522 EB RAMPS
 MILEPOST : 0.00

PAGE: 1
 FILE: 00000PH

Movements by: Primary

DATE: 6/19/02

Time Begin	From East			From South			From West			From North			Vehicle Total
	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
3:30	0	0	0	0	138	40	16	0	148	11	99	0	452
3:45	0	0	0	0	152	38	11	0	145	18	133	0	497
HR TOTAL	0	0	0	0	290	78	27	0	293	29	232	0	949
4:00 PM	0	0	0	0	134	38	21	0	135	14	104	0	446
4:15	0	0	0	0	144	38	11	0	145	13	111	0	462
4:30	0	0	0	0	140	51	20	0	121	14	96	0	442
4:45	0	0	0	0	127	47	14	0	104	11	93	0	396
HR TOTAL	0	0	0	0	545	174	66	0	505	52	404	0	1746
5:00 PM	0	0	0	0	128	41	16	0	132	7	104	0	428
5:15	0	0	0	0	119	29	25	0	128	12	100	0	413
5:30	0	0	0	0	131	29	9	0	105	5	96	0	375
5:45	0	0	0	0	125	32	12	0	112	8	98	0	387
HR TOTAL	0	0	0	0	503	131	62	0	477	32	398	0	1603
DAY TOTAL	0	0	0	0	1338	383	155	0	1275	113	1034	0	4298

PEAK PERIOD ANALYSIS FOR THE PERIOD: 3:30 PM - 6:00 PM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	..... VOLUMES .....				.... PERCENTS		
			Right	Thru	Left	Total	Right	Thru	Left
East	12:00 AM	0.00	0	0	0	0	0	0	0
South	3:45 PM	0.96	0	570	165	735	0	78	22
West	3:30 PM	0.96	59	0	573	632	9	0	91
North	3:30 PM	0.83	56	447	0	503	11	89	0
Entire Intersection									
East	3:30 PM	0.00	0	0	0	0	0	0	0
South		0.95	0	568	154	722	0	79	21
West		0.96	59	0	573	632	9	0	91
North		0.83	56	447	0	503	11	89	0

COMBINED RAW DATA 3:30 PM to 5:30 PM on February 18, 2003

Important Note: Peak-Hour Sum is 4:00 PM to 5:00 PM based on intersection count of SR 9 & 228th Street SE performed on February 11, 2003.

Active Excavators				Woody's				Insurance Auto Auctions				Fitz Auto Parts (Retail&Yard)			
Period	IN SBL	OUT WBR	IN NBR	Period	Hour	IN SBL	OUT WBR	Period	Hour	IN SBL	OUT WBR	Period	Hour	IN SBL	OUT WBR
1	1	5	1	9		0	1	1		0	0	1		2	5
2	0	1	2	4		1	0	2		1	1	2		1	0
3	0	4	0	6		1	0	3		1	0	3		0	3
4	1	4	0	8	27	0	0	4		0	0	4		1	3
5	0	4	0	4	22	0	0	5		0	2	5		0	0
6	0	0	0	0	18	0	0	6		0	1	6		0	0
7	0	1	0	1	13	0	0	7		0	2	7		0	0
8	0	1	0	1	6	0	0	8		0	0	8		0	0
Peak-Hour Sum	1	12	0	18		1	3	Sum		1	5	Sum		5	14
Wild West Mustang Ranch				Insurance Auto Auctions				Fitz Auto Parts (Retail&Yard)							
Period	IN SBL	OUT WBR	IN NBR	Period	Hour	IN SBL	OUT WBR	Period	Hour	IN SBL	OUT WBR	Period	Hour	IN SBL	OUT WBR
1	0	2	1	4		0	0	1		0	0	1		0	0
2	0	0	2	3		1	1	2		1	1	2		1	0
3	0	0	0	1		1	0	3		1	0	3		1	0
4	0	0	0	0	8	1	1	4		1	1	4		1	1
5	0	0	1	1	5	0	0	5		0	2	5		0	0
6	0	1	0	2	4	0	0	6		0	5	6		0	0
7	0	2	0	2	5	0	0	7		0	0	7		0	0
8	0	0	0	1	6	0	0	8		0	0	8		0	0
Peak-Hour Sum	0	1	2	4		2	8	Sum		2	7	Sum		10	27
CT Sales				Fitz Auto Parts (Retail&Yard)											
Period	IN SBL	OUT WBR	IN NBR	Period	Hour	IN SBL	OUT WBR	Period	Hour	IN SBL	OUT WBR	Period	Hour	IN SBL	OUT WBR
1	0	0	1	1		2	4	1		2	5	1		8	19
2	0	0	0	0		1	1	2		1	5	2		5	15
3	0	2	1	4		0	0	3		0	3	3		4	12
4	0	2	0	2	7	1	3	4		1	3	4		7	13
5	0	1	0	1	7	3	4	5		3	3	5		5	15
6	0	0	0	0	7	0	6	6		0	6	6		10	22
7	0	0	0	0	3	0	12	7		0	12	11		1	24
8	0	0	0	0	1	1	5	8		1	5	5		2	13
Peak-Hour Sum	0	5	1	7		4	15	Sum		4	17	Sum		26	62
Peak-Hour Totals															
IN SBL	OUT WBR	IN NBR	IN SBL	OUT WBR	IN NBR	IN SBL	OUT WBR	IN SBL	OUT WBR	IN SBL	OUT WBR	IN SBL	OUT WBR	IN SBL	OUT WBR
8	44	37	43	8	44	37	43	8	44	37	43	8	44	37	43

WASHINGTON STATE DEPT OF TRANSPORTATION

Site Code : 00090571
 LOCATION : SR 9
 JCT : 228TH ST SE
 MILEPOST : 0.57

PAGE: 1
 FILE: 00057AM

Movements by: Primary

DATE: 4/04/02

Time Begin	From West			From North			From East			From South			Vehicle Total
	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	RT	THRU	LT	
6:30	43	1	6	18	294	3	0	0	1	2	76	6	450
6:45	61	2	15	32	299	5	0	0	3	11	62	19	509
HR TOTAL	104	3	21	50	593	8	0	0	4	13	138	25	959
7:00 AM	51	0	11	38	283	3	0	0	0	11	54	13	464
7:15	74	0	11	26	292	1	0	0	0	3	65	20	492
7:30	79	2	15	33	267	3	0	0	1	6	70	24	500
7:45	51	1	21	32	269	1	0	0	2	5	105	18	505
HR TOTAL	255	3	58	129	1111	8	0	0	3	25	294	75	1961
8:00 AM	48	1	9	26	281	3	1	1	2	4	71	30	477
8:15	45	2	10	27	247	1	1	0	2	4	79	17	435
DAY TOTAL	452	9	98	232	2232	20	2	1	11	46	582	147	3832

PEAK PERIOD ANALYSIS FOR THE PERIOD: 6:30 AM - 8:30 AM

DIRECTION FROM	START PEAK HOUR	PEAK HR FACTOR	..... VOLUMES .....				..... PERCENTS		
			Right	Thru	Left	Total	Right	Thru	Left
West	6:45 AM	0.84	265	4	52	321	83	1	16
North	6:30 AM	0.96	114	1168	12	1294	9	90	1
East	7:30 AM	0.63	2	1	7	10	20	10	70
South	7:30 AM	0.85	19	325	89	433	4	75	21

Entire Intersection

West	7:15 AM	0.81	252	4	56	312	81	1	18
North		0.97	117	1109	8	1234	9	90	1
East		0.44	1	1	5	7	14	14	71
South		0.82	18	311	92	421	4	74	22

Snohomish Co Traffic Engineering Service

2930 Wetmore
Everett, WA, 98201

File1 : 228 ST SE @ 45 AVE SE
File2 : SARA SCHMITT - IRC
File3 : ADT#697 16:00-18:00 SPRINKLING

Site: 91192@2.04
Date: 11/13/02

Combined

*Peds not included in table data

Begin		45 AVE SE (N LEG)			228 ST SE (E LEG)			45 AVE SE (S LEG)			228 ST SE (W LEG)		
Time	Total	RHT	THRU	LEFT	RHT	THRU	LEFT	RHT	THRU	LEFT	RHT	THRU	LEFT
16:15:00	293	9	7	1	16	93	1	15	25	33	7	73	13
16:30:00	285	3	3	6	11	100	7	7	26	24	20	67	11
16:45:00	329	10	7	7	14	100	5	10	29	34	14	85	14
17:00:00	302	2	7	4	15	96	4	4	40	33	14	70	13
	1,209	24	24	18	56	389	17	36	120	124	55	295	51

Peak Volume Periods (1 hour Res: 15 min.)					
Period			Peak Period		Volume
AM	05:00:00	To 10:00:00	NA	To NA	0
Noon	10:00:00	To 15:00:00	NA	To NA	0
PM	15:00:00	To 20:00:00	16:15:00	To 17:15:00	1,209

Snohomish Co Traffic Engineering Service

2930 Wetmore
Everett, WA, 98201

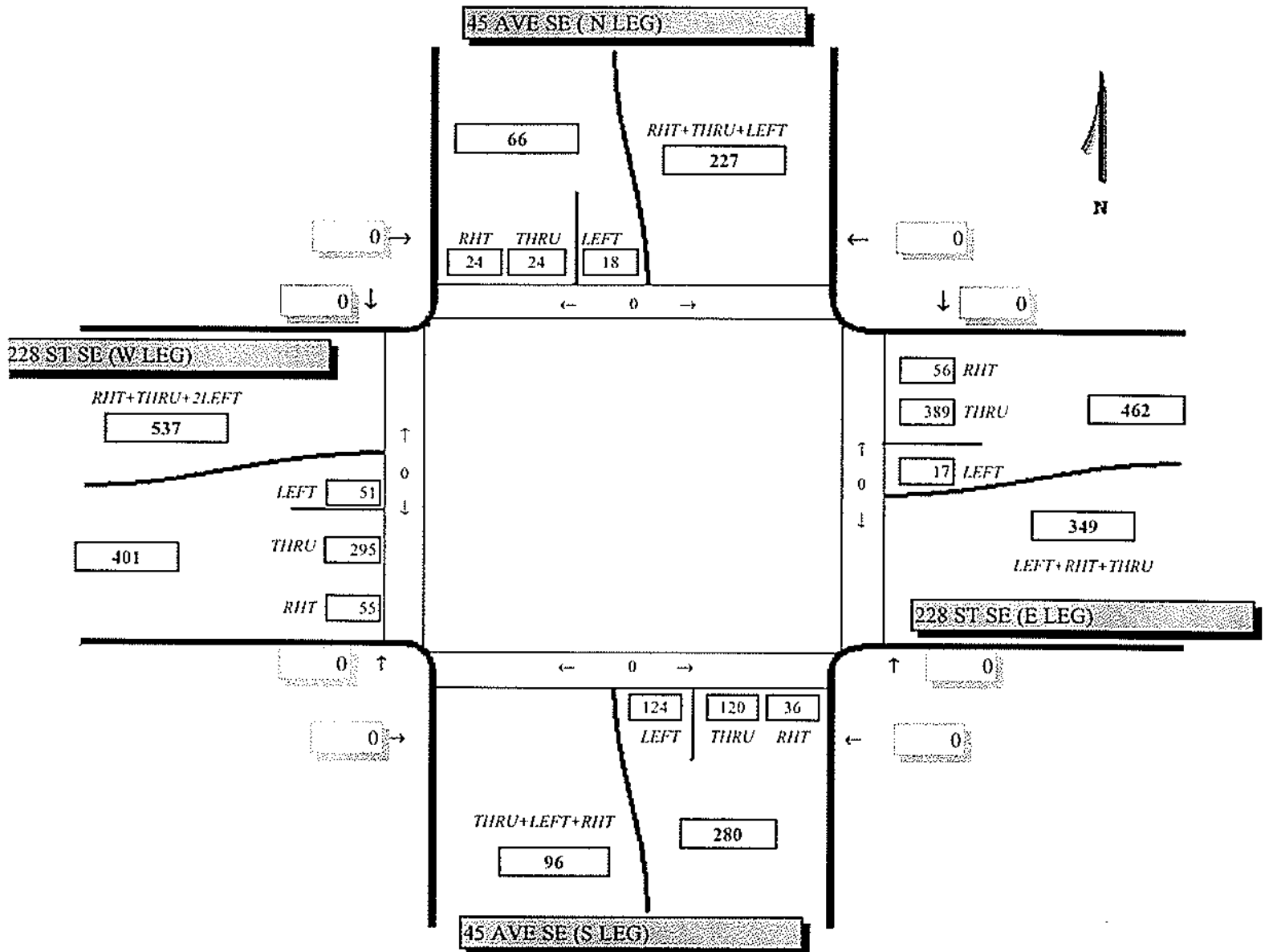
Site: 91192@2.04

Date: 11/13/02

Title1 : 228 ST SE @ 45 AVE SE
Title2 : SARA SCHMITT - IRC
Title3 : ADT#697 16:00-18:00 SPRINKLING

Combined

*Peds not included in table data



Information to Provide Developers Doing Traffic Studies

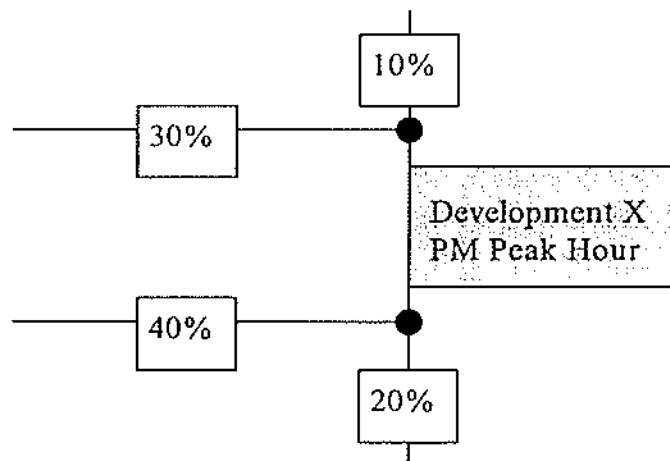
- 1. *Required Format for Trip Distributions***
- 2. *List of Key Intersections for Each TSA***
- 3. *Road Projects Assumed to be Complete within Six Years.***
- 4. *For large developments doing future LOS analysis:***
 - Document called "Conducting Future LOS Analysis"
 - List of Critical Arterial Units
 - Arterial Unit Categories
 - 132nd ST SE Diversion Factors

REQUIRED FORMAT FOR TRIP DISTRIBUTIONS

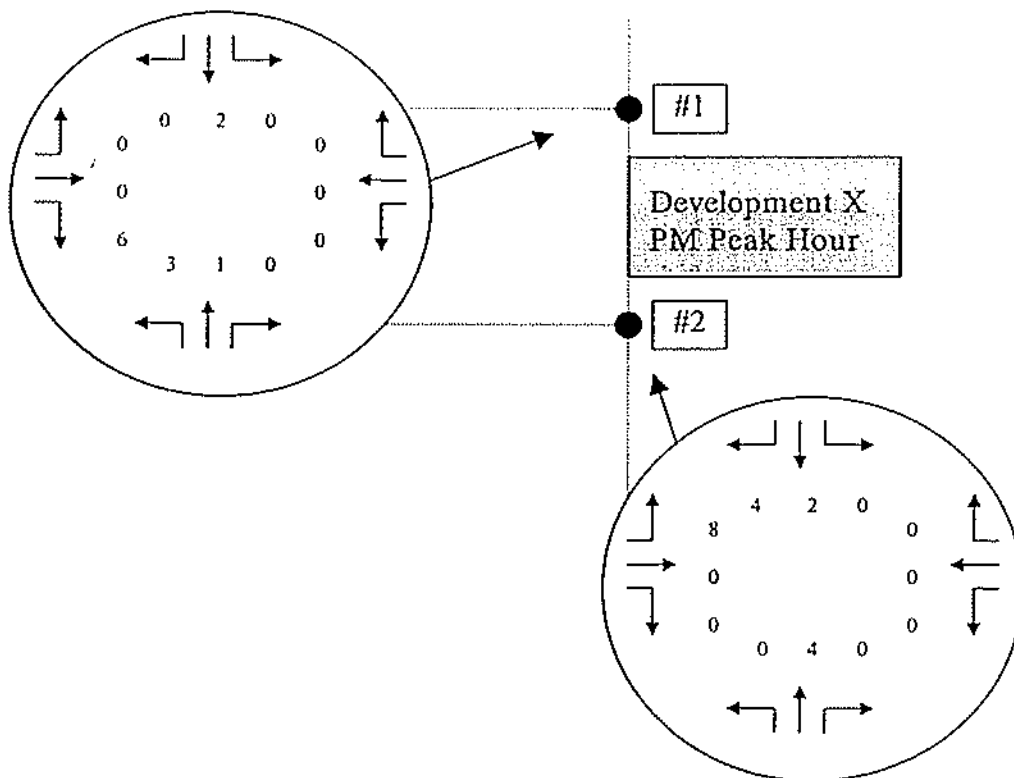
Developers will be required to do both AM and PM peak-hour distributions.

DPW will require three products for each distribution.

1. Distribution. A schematic map showing the broad distributions of trips in terms of percentages on different roads.



2. Assignment. A schematic map with the impacted key intersections identified by ID# and turning movements for each shown in separate diagrams on the same page or on different pages.



3. Tabular Format. The assignments in prescribed tabular form listing each intersection by intersection ID#, and the number of trips at each movement.

Development X. PM Peak Hour Distribution

Intersection ID#	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
#1	0	0	6	0	0	0	3	1	0	0	2	0
#2	8	0	0	0	0	0	0	4	0	0	2	4

For now, the format of trip distributions will not be a completeness issue.

Trips will be distributed onto the road system as it is expected to be in six years.

DPW maintain an updated list of the road improvements that are expected to be completed within six years.

DPW will provide this list to the developers' traffic consultants.

Key Intersections

For each arterial unit, DPW will identify the "key" intersections needed to adequately estimate level of service.

State and City intersections that lie AT the terminus of a county arterial unit WILL be included in the list of key intersections.

State and City intersections that lie NEAR the terminus of a county arterial unit MAY be included in the list of key intersections.

Through interlocal agreements, the County may require developers to provide distributions to other state or city intersections. The purpose of adding these "other" state or city intersections is to enable the state or city to determine level of service on its facilities.

Rules for how far the distribution is carried.

Within the development's TSA:

Within the developments TSA the distribution will be carried out to each key intersection at which the approach or departure volumes on any leg have three (3) or more peak hour trips.

As required through interlocal agreement, the distribution will be carried out to other state or city intersections impacted by ten or more peak hour trips

Trips assigned to a highway of statewide significance (e.g., I-5, I-405, SR-2) do not have to be distributed back onto county roads or city streets..

Outside the development's TSA:

Trips assigned to a highway of statewide significance (e.g., I-5, I-405, SR-2) do not have to be distributed further. Trips assigned to other state highways do not have to be distributed back onto county roads or city streets.

The distribution will be carried out to each key intersection at which the approach or departure volumes on any leg have three (3) or more peak hour trips, except that DPW may allow, on a case-by-case basis and at the request of the developer, to raise this threshold to 5% of the development's overall peak hour trips. An exchange of e-mails or other written correspondence between the consultant and DPW prior to submittal will be necessary to gain approval for the use of the 5% threshold which may be appropriate in certain circumstances, particularly for very large developments.

As required through interlocal agreement, the distribution will be carried out to other state or city intersections impacted by ten or more peak hour trips, except that DPW may allow, on a case-by-case basis and at the request of the developer, to raise this threshold to 5% of the development's overall peak hour trips. Note that the WSDOT threshold of ten trips is determined differently than the County threshold of three trips. Unlike the County method explained above, WSDOT adds up all of the trips at all of the individual movements on a given intersection.

		PRINT DATE		3/13/03					
SA	ENT	ROAD NAME	FROM	TO	UNID	IND	NO	SUB	STREET NAME
A	101	OLD PACIFIC HWY	STANWOOD UGB/276 ST NW	PIONEER HWY	1	702	PIONEER HWY	OLD PACIFIC HWY	
	101	OLD PACIFIC HWY	STANWOOD UGB/276 ST NW	PIONEER HWY	2	166	OLD PACIFIC HWY	276 ST NW	
A	101	OLD PACIFIC HWY	STANWOOD UGB/276 ST NW	PIONEER HWY	3	441	OLD PACIFIC HWY	300 ST NW	
A	102	PIONEER HIGHWAY	300 ST NW	SNO/SKAGIT COUNTY LINE	1	702	PIONEER HWY	OLD PACIFIC HWY	
A	102	PIONEER HIGHWAY	300 ST NW	SNO/SKAGIT COUNTY LINE	4	701	PIONEER HIGHWAY	300 ST NW	
A	103	300 ST NW	PIONEER HWY	STANWOOD UGB/42 MI. E. OF PIONEER HWY	4	701	PIONEER HIGHWAY	300 ST NW	
A	104	PIONEER HIGHWAY	STANWOOD C/L	300 ST NW	4	701	PIONEER HIGHWAY	300 ST NW	
A	104	PIONEER HIGHWAY	STANWOOD C/L	300 ST NW	5	1616	PIONEER HIGHWAY	Logen RD	
A	105	300 ST NW	STANWOOD UGB/42 MI. E/O PIONEER HWY	OLD 99 N	6	436	OLD 99 N	300 ST NW	
A	105	300 ST NW	STANWOOD UGB/42 MI. E/O PIONEER HWY	OLD 99 N	7	1729	80 AV NW	300 ST NW	
A	105	300 ST NW	STANWOOD UGB/42 MI. E/O PIONEER HWY	OLD 99 N	8	134	76 AV NW	300 ST NW	
A	105	300 ST NW	STANWOOD UGB/42 MI. E/O PIONEER HWY	OLD 99 N	9	554	68 AV NW	300 ST NW	
A	106	76 AVE NW	300 ST NW	SNO CO LINE/332 ST NW	8	134	76 AV NW	300 ST NW	
A	107	68 AVE NW	STANWOOD UGB/0.6 MI S/O 300 ST NW	332 ST NW	9	554	68 AV NW	300 ST NW	
A	107	68 AVE NW	STANWOOD UGB/0.6 MI S/O 300 ST NW	332 ST NW	10	555	68 AVE NW	332 ST NW	
A	108	68/70/72 AVE NW	276 ST NW	STANWOOD UGB/0.6 MI SO OF 300 ST NW	11	1249	70 AV NW	276 ST NW	
A	108	68/70/72 AVE NW	276 ST NW	STANWOOD UGB/0.6 MI SO OF 300 ST NW	12	1928	68 AV NW	284 ST NW	
	108	68/70/72 AVE NW	276 ST NW	STANWOOD UGB/0.6 MI SO OF 300 ST NW	13	1347	68 AV NW	Jensen RD	
A	109	300 ST NE/NW	OLD 99 N	15 AVE NE	14	1615	15 AVE NE	300 ST NE	
A	109	300 ST NE/NW	OLD 99 N	15 AVE NE	15	435	OLD 99 N	Freeborn Rd	
A	109	300 ST NE/NW	OLD 99 N	15 AVE NE	16	710	Brandstrom Rd	300 ST NW	
A	109	300 ST NE/NW	OLD 99 N	15 AVE NE	17	2177	3 AV NE	300 ST NE	
A	110	28 AVE NW	OLD 99 N	SR 532	18	895	28 AVE NW	OLD 99 N	
A	110	28 AVE NW	OLD 99 N	SR 532	19	1247	28 AVE NW	SR 532	
A	110	28 AVE NW	OLD 99 N	SR 532	20	2168	28 AVE NW	280 ST NW	
A	110	28 AVE NW	OLD 99 N	SR 532	21	955	28 AVE NW	268 ST NW	
A	111	OLD 99 N/12 AV NW	SR 532	300 ST NW	6	436	OLD 99 N	300 ST NW	
A	111	OLD 99 N/12 AV NW	SR 532	300 ST NW	15	435	OLD 99 N	Freeborn Rd	
A	111	OLD 99 N/12 AV NW	SR 532	300 ST NW	18	895	28 AVE NW	OLD 99 N	
A	111	OLD 99 N/12 AV NW	SR 532	300 ST NW	22	804	OLD 99 N	SR 532	
A	111	OLD 99 N/12 AV NW	SR 532	300 ST NW	431		SUNDAY LAKE RD	SR 532	
A	112	268 ST NE/15 AV NE	300 ST NE	STANWOOD BRYANT RD	14	1615	15 AVE NE	300 ST NE	
A	112	268 ST NE/15 AV NE	300 ST NE	STANWOOD BRYANT RD	23	619	BJORNDALH ROAD (268 ST NE)	STANWOOD BRYANT RD	
A	113	STANWOOD BRYANT RD	I-5 N-BND ON/OFF RAMP	SR 9	23	619	BJORNDALH ROAD (268 ST NE)	STANWOOD BRYANT RD	
A	113	STANWOOD BRYANT RD	I-5 N-BND ON/OFF RAMP	SR 9	24	2250	I-5 N-BND ON/OFF RAMP	STANWOOD BRYANT RD	
A	113	STANWOOD BRYANT RD	I-5 N-BND ON/OFF RAMP	SR 9	25	1250	SR 9	STANWOOD BRYANT RD	
A	113	STANWOOD BRYANT RD	I-5 N-BND ON/OFF RAMP	SR 9	29	1600	I-5/S-BND ON/OFF RAMP	PIONEER HIGHWAY E	
A	114	SUNDAY LK RD	12 AVE NW	SR 532	384	1256	SUNDAY LK RD	12 AVE NW	
A	114	SUNDAY LK RD	12 AVE NW	SR 532	431		SUNDAY LAKE RD	SR 532	
A	115	W SUNDAY LK RD	SR 532	25 AVE NW	19	1247	28 AVE NW	SR 532	
A	115	W SUNDAY LK RD	SR 532	25 AVE NW	26	1257	25 AVE NW	W SUNDAY LK RD	
A	116	GRANDVIEW RD	SR 9	115 AVE NE	25	1250	SR 9	STANWOOD BRYANT RD	
A	116	GRANDVIEW RD	SR 9	115 AVE NE	27	1618	115 AVE NE	GRANDVIEW RD	
A	116	GRANDVIEW RD	SR 9	115 AVE NE	28	1620	CEDARVALE LOOP ROAD	GRANDVIEW RD	

		PRINT DATE		3/13/03					
SA	UNIT	ROAD NAME	FROM	TO	UNIT	NOTE	SA	UNIT	ROAD NAME
A	117	PIONEER HIGHWAY E	I-5/S-BND ON/OFF RAMP	STANWOOD UGB/ STANWOOD C/L	30	668	PIONEER HIGHWAY E	212th ST NW	
	117	PIONEER HIGHWAY E	I-5/S-BND ON/OFF RAMP	STANWOOD UGB/ STANWOOD C/L	31	731	PIONEER HIGHWAY E	LARSON ROAD	
A	117	PIONEER HIGHWAY E	I-5/S-BND ON/OFF RAMP	STANWOOD UGB/ STANWOOD C/L	32	732	PIONEER HIGHWAY E	NORMAN ROAD	
A	117	PIONEER HIGHWAY E	I-5/S-BND ON/OFF RAMP	STANWOOD UGB/ STANWOOD C/L	33	747	64TH AV NW	PIONEER HIGHWAY E	
A	117	PIONEER HIGHWAY E	I-5/S-BND ON/OFF RAMP	STANWOOD UGB/ STANWOOD C/L	432		I-5 SB ON/OFF RAMPS	PIONEER HWY	
A	118	MARINE DR	LAKEWOOD RD	STANWOOD UGB/ STANWOOD C/L	34	84	MARINE DR	LAKEWOOD RD	
A	118	MARINE DR	LAKEWOOD RD	STANWOOD UGB/ STANWOOD C/L	35	83	MARINE DR	FRANK WATERS ROAD	
A	118	MARINE DR	LAKEWOOD RD	STANWOOD UGB/ STANWOOD C/L	36	634	MARINE DR	HAPPY HOLLOW ROAD	
A	118	MARINE DR	LAKEWOOD RD	STANWOOD UGB/ STANWOOD C/L	37	464	MARINE DR	NORMAN ROAD	
A	118	MARINE DR	LAKEWOOD RD	STANWOOD UGB/ STANWOOD C/L	38	1624	MARINE DR	SR 532	
A	119	NORMAN RD/236 ST NE/NW	MARINE DR	I-5	32	732	PIONEER HIGHWAY E	NORMAN ROAD	
A	119	NORMAN RD/236 ST NE/NW	MARINE DR	I-5	37	464	MARINE DR	NORMAN ROAD	
A	119	NORMAN RD/236 ST NE/NW	MARINE DR	I-5	39	1643	I-5/S-BND OFF RAMP	236 ST NW	
A	120	236 ST/19 AVE/252 ST NE	I-5/N-BND ON RAMP	SR 9	40	1642	I-5/N-BND ON RAMP	236 ST ST NE	
A	120	236 ST/19 AVE/252 ST NE	I-5/N-BND ON RAMP	SR 9	41	1640	SR 9	252 ST NE	
A	120	236 ST/19 AVE/252 ST NE	I-5/N-BND ON RAMP	SR 9	42	512	27TH AV NE	252 ST NE	
A	121	JIM CREEK RD	SR 530	LK RILEY RD	43	455	Wallitner Road	JIM CREEK RD	
A	121	JIM CREEK RD	SR 530	LK RILEY RD	44	1105	SR 530	JIM CREEK RD	
	122	115 AVE NE	SR 530	228 ST NE	45	584	115 AVE NE	228 ST NE	
	122	115 AVE NE	SR 530	228 ST NE	46	1638	115 AVE NE	SR 530	
A	123	ARL HTS/WALLITNER RD	JORDAN RD	JIM CREEK RD	43	455	Wallitner Road	JIM CREEK RD	
A	123	ARL HTS/WALLITNER RD	JORDAN RD	JIM CREEK RD	45	584	115 AVE NE	228 ST NE	
A	123	ARL HTS/WALLITNER RD	JORDAN RD	JIM CREEK RD	47	408	JORDON RD	ARL HTS RD	
A	124	HAPPY HOLLOW/VALLEY	MARINE DR	PIONEER HWY	31	731	PIONEER HIGHWAY E	LARSON ROAD	
A	124	HAPPY HOLLOW/VALLEY	MARINE DR	PIONEER HWY	36	634	MARINE DR	HAPPY HOLLOW ROAD	
A	124	HAPPY HOLLOW/VALLEY	MARINE DR	PIONEER HWY	48	616	HAPPY VALLEY	220TH ST NW	
A	125	FRANK WATERS RD	LAKEWOOD RD	MARINE DR	35	83	MARINE DR	FRANK WATERS ROAD	
A	125	FRANK WATERS RD	LAKEWOOD RD	MARINE DR	49	66	FRANK WATERS RD	LAKEWOOD RD	
A	126	40 AVE NW-HAPPY VALLEY	SR 531 (LAKEWOOD RD)	220 ST NW	48	616	HAPPY VALLEY	220TH ST NW	
A	126	40 AVE NW-HAPPY VALLEY	SR 531 (LAKEWOOD RD)	220 ST NW	385	1552	40 AVE NW	SR 531 (LAKEWOOD RD)	
A	127	3 AVE NE-SILL RD	SR 531 (172 ST NE)	PIONEER HWY	30	668	PIONEER HIGHWAY E	212th ST NW	
A	127	3 AVE NE-SILL RD	SR 531 (172 ST NE)	PIONEER HWY	50	1636	3 AVE NE-SILL RD	SR 531 (172 ST NE)	
A	128	SMOKEY PT BLVD	188 ST NE	200 ST NE	51	700	SMOKEY PT BLVD	188 ST NE	
A	128	SMOKEY PT BLVD	188 ST NE	200 ST NE	52	1601	SMOKEY PT BLVD	200 ST NE	
A	131	MARINE DR	64 ST NW	LAKEWOOD RD(188 ST NW)	34	84	MARINE DR	LAKEWOOD RD	
A	131	MARINE DR	64 ST NW	LAKEWOOD RD(188 ST NW)	60	123	MARINE DR	64 ST NW	
A	131	MARINE DR	64 ST NW	LAKEWOOD RD(188 ST NW)	61	1151	MARINE DR	KAYAK POINT ROAD	
A	132	LAKEWOOD RD	MARINE DR	SR 531	34	84	MARINE DR	LAKEWOOD RD	
	132	LAKEWOOD RD	MARINE DR	SR 531	49	66	FRANK WATERS RD	LAKEWOOD RD	
	132	LAKEWOOD RD	MARINE DR	SR 531	62	80	W LK GOODWIN RD	LAKEWOOD RD	
	132	LAKEWOOD RD	MARINE DR	SR 531	63	2264	E LK GOODWIN RD	LAKEWOOD RD	

		PRINT DATE	3/13/03				
UNIT	ROAD NAME	FROM	TO	UNIT	ROAD NAME	FROM	TO
A	133 W LK GOODWIN RD	46 AVE NW	LAKEWOOD RD	62	80 W LK GOODWIN RD	LAKEWOOD RD	
A	133 W LK GOODWIN RD	46 AVE NW	LAKEWOOD RD	64	534 E LK GOODWIN RD	W LK GOODWIN RD	
	E LK GOODWIN/46 AVE						
	134 NW	140 ST NW	WENBERG ST PK ENT	64	534 E LK GOODWIN RD	W LK GOODWIN RD	
	E LK GOODWIN/46 AVE						
A	134 NW	140 ST NW	WENBERG ST PK ENT	65	531 46 AVE NW	140 ST NW	
	E LK GOODWIN/46 AVE						
A	134 NW	140 ST NW	WENBERG ST PK ENT	66	1712 SR 531	Rose Rd	
	16 AVE						
A	135 NW/WILLOW/MCRAE	140 ST NW	SR 531	67	498 16 AVE NW	140 ST NW	
	16 AVE						
A	135 NW/WILLOW/MCRAE	140 ST NW	SR 531	68	1633 MCRAE RD NW	SR 531	
	16 AVE						
A	135 NW/WILLOW/MCRAE	140 ST NW	SR 531	69	501 16th AVE NW	MCRAE RD NW	
	23 AVE NE/FORTY-						
A	136 FIVE	140 ST NW	SR 531	70	116 FORTY-FIVE RD	SR 531	
	23 AVE NE/FORTY-						
A	136 FIVE	140 ST NW	SR 531	71	68 23RD AV NE	140 ST NE	
	23 AVE NE/FORTY-						
A	136 FIVE	140 ST NW	SR 531	72	115 FORTY-FIVE RD	MCRAE RD NE	
	KAYAK PT RD/140 ST						
A	137 NW	MARINE DR	46 AVE NW	61	1151 MARINE DR	KAYAK POINT ROAD	
	KAYAK PT RD/140 ST						
A	137 NW	MARINE DR	46 AVE NW	65	531 46 AVE NW	140 ST NW	
	KAYAK PT RD/140 ST						
A	137 NW	MARINE DR	46 AVE NW	74	1211 KAYAK PT RD	140TH ST NW	
A	138 140 ST NE/NW	46 AVE NW	23 AVE NE	65	531 46 AVE NW	140 ST NW	
A	138 140 ST NE/NW	46 AVE NW	23 AVE NE	67	498 16 AVE NW	140 ST NW	
A	138 140 ST NE/NW	46 AVE NW	23 AVE NE	71	68 23RD AV NE	140 ST NE	
	140/STIMPSON/136 ST						
A	139 NE	23 AVE NE	MARYSVILLE C/L	71	68 23RD AV NE	140 ST NE	
	140/STIMPSON/136 ST						
A	139 NE	23 AVE NE	MARYSVILLE C/L	75	69 34 AV NE	STIMPSON RD	
A	141 152 ST NE	MARYSVILLE C/L	51 AVE NE	76	52 51 AVE NE	152 ST NE	
	142 51 AVE NE	S. OF 152ND ST NE (MARYSVILLE C/L)	2063.05' S/o SR 531	76	52 51 AVE NE	152 ST NE	
	142 51 AVE NE	S. OF 152ND ST NE (MARYSVILLE C/L)	2063.05' S/o SR 531	77	2058 51 AVE NE	SR 531	
A	143 136 ST NE	MARYSVILLE C/L	51 AVE NE	78	71 51 AVE NE	136 ST NE	
A	144 SHOULTES/51 AVE NE	MARYSVILLE C/L	136 ST NE	78	71 51 AVE NE	136 ST NE	
A	144 SHOULTES/51 AVE NE	MARYSVILLE C/L	136 ST NE	79	1018 SHOULTES	100TH ST NE	
A	144 SHOULTES/51 AVE NE	MARYSVILLE C/L	136 ST NE	80	76 51 Ave NE/Shoultess Road	108th ST NE	
A	144 SHOULTES/51 AVE NE	MARYSVILLE C/L	136 ST NE	81	72 51 AVE NE	132ND ST NE	
A	144 SHOULTES/51 AVE NE	MARYSVILLE C/L	136 ST NE	426	754 51st AV NE	108TH ST NE	
A	145 108 ST NE	51 AVE NE	67 AVE NE	80	76 51 Ave NE/Shoultess Road	108th ST NE	
A	145 108 ST NE	51 AVE NE	67 AVE NE	82	77 67 AVE NE	108 ST NE	
A	145 108 ST NE	51 AVE NE	67 AVE NE	426	754 51st AV NE	108TH ST NE	
A	145 108 ST NE	51 AVE NE	67 AVE NE	426	754 51st AV NE	108TH ST NE	
	146 132 ST NE	51 AVE NE	58TH DR NE	81	72 51 AVE NE	132ND ST NE	
A	147 67 AVE NE	108 ST NE	2020' S/o SR 531	82	77 67 AVE NE	108 ST NE	
A	147 67 AVE NE	108 ST NE	2020' S/o SR 531	83	73 67 AVE NE	132 ST NE	
A	147 67 AVE NE	108 ST NE	2020' S/o SR 531	84	366 67 AVE NE	152 ST NE	
A	147 67 AVE NE	108 ST NE	2020' S/o SR 531	85	1632 67 AVE NE	SR 531	
A	148 100 ST NE	MARYSVILLE C/L	67 AVE NE	79	1018 SHOULTES	100TH ST NE	
A	148 100 ST NE	MARYSVILLE C/L	67 AVE NE	86	661 67 AVE NE	100 ST NE	
A	148 100 ST NE	MARYSVILLE C/L	67 AVE NE	87	127 51 ST AV NE	100 ST NE	
A	148 100 ST NE	MARYSVILLE C/L	67 AVE NE	93	51 55TH AV NE	100 ST NE	
A	148 100 ST NE	MARYSVILLE C/L	67 AVE NE	301	1663 48 DR NE	100 ST NE	
A	149 88 ST NE	MARYSVILLE C/L	MARYSVILLE C/L	88	1824 STATE AV	88 ST NE	
A	149 88 ST NE	MARYSVILLE C/L	MARYSVILLE C/L	89	778 48TH DR NE	88 ST NE	
A	149 88 ST NE	MARYSVILLE C/L	MARYSVILLE C/L	90	708 51ST AV NE	88 ST NE	
A	149 88 ST NE	MARYSVILLE C/L	MARYSVILLE C/L	91	129 55TH AV NE	88 ST NE	
A	149 88 ST NE	MARYSVILLE C/L	MARYSVILLE C/L	92	902 60TH AV NE	88 ST NE	
A	150 132 ST NE/99 AVE NE	SR 9	116 ST NE	94	712 99 AVE NE	132 ST NE	
A	150 132 ST NE/99 AVE NE	SR 9	116 ST NE	95	1644 SR 9	132 ST NE	
	150 132 ST NE/99 AVE NE	SR 9	116 ST NE	96	1208 99 AVE NE	116TH AV NE	
	152 84 ST NE	MARYSVILLE C/L	SR 9	98	567 SR 9	84 ST NE	
A	161 MARINE DR	19 AVE NE	64 ST NW	60	123 MARINE DR	64 ST NW	

		PRINT DATE	3/13/03				
CA	UNIT	ROAD NAME	TO FROM	TO FROM	TO FROM	TO FROM	TO FROM
A	161	MARINE DR	19 AVE NE	64 ST NW	111	961 19 AVE NE	MARINE DR
A	161	MARINE DR	19 AVE NE	64 ST NW	112	685 MERIDIAN AV N	MARINE DR
	162	27 AVE NE	MARINE DR NE	END OF CO RD	113	513 27 AVE NE	MARINE DR NE
	162	27 AVE NE	MARINE DR NE	END OF CO RD	114	1539 27 AVE NE	88TH ST NE
A	163	MARINE DR NE	I-5	19 AVE NE	111	961 19 AVE NE	MARINE DR
A	163	MARINE DR NE	I-5	19 AVE NE	113	513 27 AVE NE	MARINE DR NE
A	163	MARINE DR NE	I-5	19 AVE NE	388	1264 I-5 RAMP	MARINE DR NE
A	165	71/67 AVE NE/44 ST NE	SOPER HILL RD	MARYSVILLE C/L	116	556 SUNNYSIDE BLVD	SOPER HILL ROAD
A	165	71/67 AVE NE/44 ST NE	SOPER HILL RD	MARYSVILLE C/L	117	530 71 AVE NE	44TH ST NE
A	168	SOPER HILL RD	71 AVE NE	SR 9	116	556 SUNNYSIDE BLVD	SOPER HILL ROAD
A	168	SOPER HILL RD	71 AVE NE	SR 9	118	562 83 AVE NE	SOPER HILL RD
A	168	SOPER HILL RD	71 AVE NE	SR 9	119	1292 SR 9	SOPER HILL RD
A	239	67 AVENUE	MARYSVILLE C/L	108 ST NE	82	77 67 AVE NE	108 ST NE
A	239	67 AVENUE	MARYSVILLE C/L	108 ST NE	86	661 67 AVE NE	100 ST NE
A	239	67 AVENUE	MARYSVILLE C/L	108 ST NE	295	1293 67 AVE NE	88 ST NE
A	240	DETLING RD	PIONEER HWY (STAN UGB) / 300 ST NW	OLD PACIFIC HWY	3	441 OLD PACIFIC HWY	300 ST NW
A	240	DETLING RD	PIONEER HWY (STAN UGB) / 300 ST NW	OLD PACIFIC HWY	4	701 PIONEER HIGHWAY	300 ST NW
A	241	152 ST NE	51 AVE NE	67 AVE NE	76	52 51 AVE NE	152 ST NE
A	241	152 ST NE	51 AVE NE	67 AVE NE	84	366 67 AVE NE	152 ST NE
A	242	108 ST NE	67 AVE NE	SR 9	82	77 67 AVE NE	108 ST NE
A	242	108 ST NE	67 AVE NE	SR 9	296	1681 SR 9	108 ST NE
A	243	132 ST NE	ARL-MARY UGB/ E/o 58TH DR NE	67 AVE NE	81	72 51 AVE NE	132ND ST NE
A	243	132 ST NE	ARL-MARY UGB/ E/o 58TH DR NE	67 AVE NE	83	73 67 AVE NE	132 ST NE
A	248	34 AVE NE	116 ST NE	136 ST NE	75	69 34 AV NE	STIMPSON RD
A	248	34 AVE NE	116 ST NE	136 ST NE	298	74 34 AVE NE	116 ST NE
A	249	188 ST NE/47 AV NE	SMOKEY PT BLVD	S. OF 196TH PL NE (ARLINGTON C/L)	51	700 SMOKEY PT BLVD	188 ST NE
	249	188 ST NE/47 AV NE	SMOKEY PT BLVD	S. OF 196TH PL NE (ARLINGTON C/L)	299	537 47 AV NE	CEMETERY RD
	249	188 ST NE/47 AV NE	SMOKEY PT BLVD	S. OF 196TH PL NE (ARLINGTON C/L)	300	521 35 AV NE	188 ST NE
A	250	47/48 DR NE	MARYSVILLE C/L	84 ST NE	89	778 48TH DR NE	88 ST NE
A	250	47/48 DR NE	MARYSVILLE C/L	84 ST NE	301	1663 48 DR NE	100 ST NE
A	250	47/48 DR NE	MARYSVILLE C/L	84 ST NE	302	132 47 DR NE	84 ST NE
A	312	88th ST NE	Marysville C/L	I-5 NB on-ramps	392	I-5 NB RAMP	88TH ST NE
A	320	JORDAN/ARLINGTON HTS	SR 530	TSA B/ 0.67 MI N/o 148 ST NE (PVT RD)	47	408 JORDON RD	ARL HTS RD
A	320	JORDAN/ARLINGTON HTS	SR 530	TSA B/ 0.67 MI N/o 148 ST NE (PVT RD)	370	410 SR 530	JORDAN/ARLINGTON HTS
A	321	BURN RD	ARLINGTON UGB/ 1 MI S/o OLD BURN RD	JORDAN TRAILS RD	57	1221 BURN RD	JORDAN TRAILS RD
A	321	BURN RD	ARLINGTON UGB/ 1 MI S/o OLD BURN RD	JORDAN TRAILS RD	371	1548 STILLIGUAMISH AV	209 ST NE
A	349	MT LOOP HWY	MT LOOP HWY (USFS)-END OF PAVEMENT	DARRINGTON C/L	377	2366 MT LOOP HWY	SR 530
A	351	88TH ST NE	27TH AV NE	I-5 RAMP	114	1539 27 AVE NE	88TH ST NE
A	351	88TH ST NE	27TH AV NE	I-5 RAMP	430	2367 I-5 SB Ramps	88 ST NE
A	357	SMOKEY PT BLVD	200 ST NE	SR 530	52	1601 SMOKEY PT BLVD	200 ST NE
A	357	SMOKEY PT BLVD	200 ST NE	SR 530	53	1606 SMOKEY PT BLVD	SR 530
A	359	51 AVE NE	136TH ST NE	S/o 152ND ST NE (MARYSVILLE C/L AT RR XING)	76	52 51 AVE NE	152 ST NE
A	359	51 AVE NE	136TH ST NE	S/o 152ND ST NE (MARYSVILLE C/L AT RR XING)	78	71 51 AVE NE	136 ST NE
A	362	51 AVE NE	1394.41' S/o SR 531	SR 531	77	2058 51 AVE NE	SR 531
A	370	51st AV NE	88th ST NE	108th ST NE	87	127 51 ST AV NE	100 ST NE
A	370	51st AV NE	88th ST NE	108th ST NE	90	708 51ST AV NE	88 ST NE
A	370	51st AV NE	88th ST NE	108th ST NE	426	754 51st AV NE	108TH ST NE
	129	JORDAN RD	GRANITE FALLS UGB/ 0.4 MI S/o BERGAN RD	TSA A/ 0.67 MI N/o 148 ST NE (PVT RD)	54	1590 JORDAN RD	ENGBRETSON ROAD

		PRINT DATE		3/13/03					
TSA/DATE		ROADNAME		FROM		TO		SUNNYVALE DATE	
						North/South Street Name		East/West Street Name	
			GRANITE FALLS						
			UGB/.04 MI S/o BERGAN						
			RD						
			129 JORDAN RD						
			130 159 AVE NE/BURN RD						
			130 159 AVE NE/BURN RD						
B			151 99 AVE NE						
B			151 99 AVE NE						
B			151 99 AVE NE						
B			153 84 ST NE						
B			153 84 ST NE						
B			153 84 ST NE						
B			153 84 ST NE						
B			153 84 ST NE						
B			153 84 ST NE						
B			154 123 AVE NE/44 ST NE						
B			154 123 AVE NE/44 ST NE						
B			154 123 AVE NE/44 ST NE						
B			155 100 ST NE						
B			155 100 ST NE						
B			156 163 AVE NE						
B			156 163 AVE NE						
B			157 MT LOOP HWY						
B			158 LK ROESIGER/MENZEL						
B			159 ROBE MENZEL RD						
B			159 ROBE MENZEL RD						
B			160 NEWBERG RD-ROBE						
B			160 NEWBERG RD-ROBE						
B			164 SUNNYSIDE BLVD						
B			164 SUNNYSIDE BLVD						
B			166 SUNNYSIDE BLVD						
B			167 83 AVE NE						
B			169 LUNDEEN PARK WY						
B			169 EXT						
B			169 LUNDEEN PARK WY						
B			169 EXT						
B			170 SOPER HILL RD						
B			170 SOPER HILL RD						
B			172 LUNDEEN PARK WY						
B			172 LUNDEEN PARK WY						
B			172 LUNDEEN PARK WY						
B			172 LUNDEEN PARK WY						
B			172 LUNDEEN PARK WY						
B			173 99 AVE NE						
B			173 99 AVE NE						
B			174 CALLOW RD						
B			174 CALLOW RD						
B			175 LAKE VIEW DR/20 ST						
B			175 NE						
B			175 LAKE VIEW DR/20 ST						
B			176 S/N MACHIAS RD						
B			176 S/N MACHIAS RD						
B			177 S/E LK STEVENS RD						
B			177 S/E LK STEVENS RD						
B			178 S/N DAVIES RD						
B			178 S/N DAVIES RD						
B			178 S/N DAVIES RD						

		PRINT DATE		3/13/03					
SA UNIT	ROAD NAME	FROM	TO	DENSITY	INDIC	North/South Street Name	East/West Street Name		
R	179 S LK STEV/MACHIAS CUT-OFF RD	20 ST SE	LK STEVENS UGB	133	59	E LK STEVENS RD	MACHIAS CUTOFF		
	179 S LK STEV/MACHIAS CUT-OFF RD	20 ST SE	LK STEVENS UGB	136	439	S DAVIES RD	S LK STEVENS RD		
B	179 S LK STEV/MACHIAS CUT-OFF RD	20 ST SE	LK STEVENS UGB	138	57	S LK STEV RD	20 ST SE		
B	179 S LK STEV/MACHIAS CUT-OFF RD	20 ST SE	LK STEVENS UGB	139	1571	123RD AV SE	MACHIAS CUTOFF		
B	180 MACHIAS CUT-OFF/S MACHIAS RD	LK STEVENS UGB	OK MILL RD	130	60	S MACHIAS RD	OK MILL RD		
B	180 MACHIAS CUT-OFF/S MACHIAS RD	LK STEVENS UGB	OK MILL RD	139	1571	123RD AV SE	MACHIAS CUTOFF		
B	180 MACHIAS RD	LK STEVENS UGB	OK MILL RD	140	462	WILLIAMS RD	MACHIAS CUT-OFF		
B	180 MACHIAS CUT-OFF/S MACHIAS RD	LK STEVENS UGB	OK MILL RD	141	463	S MACHIAS RD	MACHIAS CUT-OFF		
B	181 OK MILL/CRESWELL RD	S MACHIAS RD	DUBUQUE RD	110	470	NEWBERG RD	OK MILL RD		
B	181 OK MILL/CRESWELL RD	S MACHIAS RD	DUBUQUE RD	130	60	S MACHIAS RD	OK MILL RD		
B	181 OK MILL/CRESWELL RD	S MACHIAS RD	DUBUQUE RD	142	433	CARLSON RD	OK MILL RD		
B	181 OK MILL/CRESWELL RD	S MACHIAS RD	DUBUQUE RD	143	434	CRESWELL RD	OK MILL RD		
B	181 OK MILL/CRESWELL RD	S MACHIAS RD	DUBUQUE RD	144	721	CRESWELL RD	DUBUQUE RD		
B	182 SE CARLSON RD/171 AVE	OK MILL RD	THREE LAKES RD/TSA BOUNDARIES B/C	142	433	CARLSON RD	OK MILL RD		
B	182 SE CARLSON RD/171 AVE	OK MILL RD	THREE LAKES RD/TSA BOUNDARIES B/C	145	114	171 AVE SE	DUBUQUE RD		
	182 SE CARLSON RD/171 AVE	OK MILL RD	THREE LAKES RD/TSA BOUNDARIES B/C	146	606	171 AVE SE	THREE LAKES RD		
B	183 20 ST SE/WILLIAMS RD	S LK STEVENS RD	LK STEVENS UGB/ 0.14 MI NW/o 124 AVE SE	138	57	S LK STEV RD	20 ST SE		
B	183 20 ST SE/WILLIAMS RD	S LK STEVENS RD	LK STEVENS UGB/ 0.14 MI NW/o 124 AVE SE	140	462	WILLIAMS RD	MACHIAS CUT-OFF		
B	184 S LK STEVENS RD	87 AVE SE	LK STEVENS UGB/ .21 MI NE/o 91 AVE SE	147	477	SR 9	S LK STEVENS RD		
B	184 S LK STEVENS RD	87 AVE SE	LK STEVENS UGB/ .21 MI NE/o 91 AVE SE	148	569	87 AVE SE	S LK STEVENS RD		
B	184 S LK STEVENS RD	87 AVE SE	LK STEVENS UGB/ .21 MI NE/o 91 AVE SE	421	1066	91 AV SE	S Lk Stevens Rd		
B	185 CAVALERO/S LK STEVENS RD	LK STEVENS UGB	87 AVE SE	148	569	87 AVE SE	S LK STEVENS RD		
B	185 CAVALERO/S LK STEVENS RD	LK STEVENS UGB	87 AVE SE	149	508	CAVALERO RD	20TH ST SE		
B	187 S MACHIAS RD	SR 2	MACHIAS CUTOFF	141	463	S MACHIAS RD	MACHIAS CUT-OFF		
B	187 S MACHIAS RD	SR 2	MACHIAS CUTOFF	150	121	S MACHIAS RD	RITCHIE RD		
B	187 S MACHIAS RD	SR 2	MACHIAS CUTOFF	151	442	S MACHIAS RD	DUBUQUE RD		
B	188 DUBUQUE RD	S MACHIAS RD	STORM LK RD	145	114	171 AVE SE	DUBUQUE RD		
B	188 DUBUQUE RD	S MACHIAS RD	STORM LK RD	151	442	S MACHIAS RD	DUBUQUE RD		
B	188 DUBUQUE RD	S MACHIAS RD	STORM LK RD	152	597	139TH AV SE	DUBUQUE RD		
B	188 DUBUQUE RD	S MACHIAS RD	STORM LK RD	153	41	STORM LAKE RD	DUBUQUE RD		
B	191 139 AVE SE	THREE LAKES RD	DUBUQUE RD	152	597	139TH AV SE	DUBUQUE RD		
B	191 139 AVE SE	THREE LAKES RD	DUBUQUE RD	158	598	139 AVE SE	THREE LAKES RD		
B	192 THREE LAKES RD	123 AVE SE (E 1/2)/SNOHOMISH C/L	171 AVE SE	146	606	171 AVE SE	THREE LAKES RD		
B	192 THREE LAKES RD	123 AVE SE (E 1/2)/SNOHOMISH C/L	171 AVE SE	158	598	139 AVE SE	THREE LAKES RD		
R	192 THREE LAKES RD	123 AVE SE (E 1/2)/SNOHOMISH C/L	171 AVE SE	159	589	131ST AV SE	THREE LAKES RD		
	192 THREE LAKES RD	123 AVE SE (E 1/2)/SNOHOMISH C/L	171 AVE SE	160	112	S MACHIAS RD	THREE LAKES RD		
B	238 20 ST SE	SR 204	SR 9	149	508	CAVALERO RD	20TH ST SE		

		PRINT DATE		3/13/03					
SA	UNIT	ROAD NAME	FROM	TO	UNITS	ADJ	North/South Street Name	East/West Street Name	
B	238	20 ST SE	SR 204	SR 9	289	2063	SR 204/SR 2	20 ST SE	
B	238	20 ST SE	SR 204	SR 9	290	1707	79 AV SE	20 ST SE	
B	238	20 ST SE	SR 204	SR 9	291	130	83 AV SE	20 ST SE	
B	238	20 ST SE	SR 204	SR 9	292	95	91 AV SE	20 ST SE	
B	238	20 ST SE	SR 204	SR 9	294	369	SR 9	20 ST SE	
B	244	SUNNYSIDE BLVD	SR 204	LK STEVENS UGB/ .75 MI N/o VERNON RD	116	556	SUNNYSIDE BLVD	SOPER HILL ROAD	
B	244	SUNNYSIDE BLVD	SR 204	LK STEVENS UGB/ .75 MI N/o VERNON RD	297	1804	SR 204	SUNNYSIDE BLVD	
B	245	S LK STEVENS RD	LK STEVENS UGB/ .21 MI NE/o 91 AVE SE	20 ST SE	138	57	S LK STEV RD	20 ST SE	
B	245	S LK STEVENS RD	LK STEVENS UGB/ .21 MI NE/o 91 AVE SE	20 ST SE	147	477	SR 9	S LK STEVENS RD	
B	245	S LK STEVENS RD	LK STEVENS UGB/ .21 MI NE/o 91 AVE SE	20 ST SE	396	360	103rd Avenue SE	S. Lake Stevens Road	
B	245	S LK STEVENS RD	LK STEVENS UGB/ .21 MI NE/o 91 AVE SE	20 ST SE	424	2287	99 AV SE	S LK STEVENS RD	
B	256	BUNK FOSS RD	SR 9	S MACHIAS RD	150	121	S MACHIAS RD	RITCHIE RD	
B	256	BUNK FOSS RD	SR 9	S MACHIAS RD	311	1201	SR 9	BUNK FOSS RD	
B	256	BUNK FOSS RD	SR 9	S MACHIAS RD	312	1095	103 AV SE	BUNK FOSS RD	
B	308	N MACHIAS RD	SR 92	LK STEVENS UGB/ 12 ST SE	131	1065	N MACHIAS RD	16TH ST NE	
B	308	N MACHIAS RD	SR 92	LK STEVENS UGB/ 12 ST SE	132	1320	N MACHIAS RD	SR 92	
B	309	WILLIAMS RD	LK STEVENS UGB/ 315 FT NW/o 124 AVE SE	MACHIAS CUTOFF	140	462	WILLIAMS RD	MACHIAS CUT-OFF	
B	313	4 ST NE	92 AVE NE	99 AVE NE	363	1652	99 AVE NE	4 ST NE	
B	313	4 ST NE	92 AVE NE	99 AVE NE	366	1902	92 AVE NE	SR 204	
B	313	4 ST NE	92 AVE NE	99 AVE NE	434		SR 9	SR 204	
B	314	99 AVE SE/NE	20 ST SE	4 ST NE	363	1652	99 AVE NE	4 ST NE	
B	314	99 AVE SE/NE	20 ST SE	4 ST NE	364	506	99 AVE SE	20 ST SE	
B	314	99 AVE SE/NE	20 ST SE	4 ST NE	365	575	99 AVE SE/NE	MARKET PLACE/ CHAPEL HILL RD	
B	314	99 AVE SE/NE	20 ST SE	4 ST NE	424	2287	99 AV SE	S LK STEVENS RD	
B	316	20 ST SE	SR 9	S LK STEVENS RD	138	57	S LK STEV RD	20 ST SE	
B	316	20 ST SE	SR 9	S LK STEVENS RD	294	369	SR 9	20 ST SE	
B	316	20 ST SE	SR 9	S LK STEVENS RD	364	506	99 AVE SE	20 ST SE	
B	317	91 AVE SE	20 ST SE	SR 204	292	95	91 AV SE	20 ST SE	
B	317	91 AVE SE	20 ST SE	SR 204	367	880	91 AVE SE	MARKET PLACE	
B	317	91 AVE SE	20 ST SE	SR 204	368	400	91 AVE SE	SR 204	
B	317	91 AVE SE	20 ST SE	SR 204	419	510	91st Ave SE	8th St SE	
B	319	MARKET PL /	SR 9	N LK DAVIES RD	137	149	N DAVIES RD	CHAPEL HILL RD	
B	319	MARKET PL	SR 9	N LK DAVIES RD	365	575	99 AVE SE/NE	MARKET PLACE/ CHAPEL HILL RD	
B	319	MARKET PL	SR 9	N LK DAVIES RD	369	989	SR 9	MARKET PL	
B	323	DUBUQUE RD/LK ROESIGER RD	STORM LAKE RD	4 ST NE/ TSA B AND C BOUNDARIES	144	721	CRESWELL RD	DUBUQUE RD	
B	323	DUBUQUE RD/LK ROESIGER RD	STORM LAKE RD	4 ST NE/ TSA B AND C BOUNDARIES	153	41	STORM LAKE RD	DUBUQUE RD	
B	323	DUBUQUE RD/LK ROESIGER RD	STORM LAKE RD	4 ST NE/ TSA B AND C BOUNDARIES	372	443	S LK ROESIGER RD	WOODS CREEK RD	
B	325	SOPER HILL RD	71 AVE NE	SR 9	116	556	SUNNYSIDE BLVD	SOPER HILL ROAD	
B	325	SOPER HILL RD	71 AVE NE	SR 9	118	562	83 AVE NE	SOPER HILL RD	
B	325	SOPER HILL RD	71 AVE NE	SR 9	119	1292	SR 9	SOPER HILL RD	
B	328	STORM LK RD	MERO RD	DUBUQUE RD	153	41	STORM LAKE RD	DUBUQUE RD	
B	328	STORM LK RD	MERO RD	DUBUQUE RD	157	467	STORM LAKE RD	MERO RD	
B	342	VERNON RD	LUNDEEN PARKWAY	LAKE STEVENS C/L	126	432	CALLOW RD	LUNDEEN PARK	
B	343	MENZEL LK RD	GRANITE FALLS UGB	GRANITE FALLS C/L	107	1677	E PIONEER ST	S ALDER ROAD	
B	344	100 ST NE	GRANITE FALLS C/L	FALLS C/L	105	1693	JORDAN RD	100 ST NE	
B	346	ROBE MENZEL RD	GRANITE FALLS C/L	BRIDGE #204	108	1592	ROBE MENZEL RD	E PIONEER ST	
B	358	MARKET PL	SR 204	SR 9	367	880	91 AVE SE	MARKET PLACE	
B	358	MARKET PL	SR 204	SR 9	369	989	SR 9	MARKET PL	
B	358	MARKET PL	SR 204	SR 9	380	988	MARKET PL	SR 204	
B	363	CAVALERO RD	20 ST SE	LK STEVENS UGB	149	508	CAVALERO RD	20TH ST SE	
B	364	MENZEL LK RD	GRANITE FALLS C/L	S. ALDER AVE (GRANITE FALLS C/L)	107	1677	E PIONEER ST	S ALDER ROAD	

		PRINT DATE		3/13/03			
LOCAL ROAD NAME		FROM		TO		NON-SOUTH STREET NAME	
	365 171 AVE NE	WESTWICK RD/100 ST SE	THREE LAKES RD/TSA BOUNDARIES B/C	146	606 171 AVE SE	THREE LAKES RD	
B	365 171 AVE NE	WESTWICK RD/100 ST SE	THREE LAKES RD/TSA BOUNDARIES B/C	381	1031 167 AV SE	WESTWICK RD	
B	369 VERNON RD	LUNDEEN PARK WAY	SR 9 / SR 204	122	461 VERNON RD	LUNDEEN PARK WY	
B	369 VERNON RD	LUNDEEN PARK WAY	SR 9 / SR 204	135	58 VERNON RD	N DAVIES RD	
B	369 VERNON RD	LUNDEEN PARK WAY	SR 9 / SR 204	366	1902 92 AVE NE	SR 204	
B	369 VERNON RD	LUNDEEN PARK WAY	SR 9 / SR 204	434	SR 9	SR 204	
B	381 4 ST SE	SR 9	99 AVE SE	394	487 SR 9	4th St SE	
B	381 4 ST SE	SR 9	99 AVE SE	395	486 99 Ave SE	4 St SE	
B	382 103 AVE SE	S LK STEVENS RD	32 ST SE	396	360 103rd Avenue SE	S. Lake Stevens Road	
B	382 103 AVE SE	S LK STEVENS RD	32 ST SE	398	1071 103rd Avenue SE	32nd Street SE	
B	383 10 ST SE	SR 204	79 AVE SE	399	1998 SR 204	10th St SE	
B	383 10 ST SE	SR 204	79 AVE SE	403	2246 79 AV SE	10 ST SE	
B	384 LAKE DR	SOPER HILL RD	SR 92	401	1583 Lake Drive	SR 92	
B	384 LAKE DR	SOPER HILL RD	SR 92	402	466 LAKE DRIVE	SOPER HILL RD	
B	385 79 AVE SE	20 ST SE	8 ST SE	290	1707 79 AV SE	20 ST SE	
B	385 79 AVE SE	20 ST SE	8 ST SE	403	2246 79 AV SE	10 ST SE	
B	386 VERNON RD	SR 9	LUNDEEN PARK WAY	405	1561 91st Ave NE	Vernon Road	
B	386 VERNON RD	SR 9	LUNDEEN PARK WAY	406	LUNDEEN PARK WY EXT (FUTURE)	VERNON RD	
B	387 83 AVE SE	20 ST SE	4 ST SE	291	130 83 AV SE	20 ST SE	
B	387 83 AVE SE	20 ST SE	4 ST SE	408	809 83rd Ave SE	8th St SE	
B	388 131 AVE NE	LAKE STEVENS C/L	2 ST SE	411	1584 131 AV NE	4 ST NE	
B	388 131 AVE NE	LAKE STEVENS C/L	2 ST SE	412	1565 131 AV NE	Meridian AV	
B	388 131 AVE NE	LAKE STEVENS C/L	2 ST SE	413	1932 131st Avenue NE	16th Street NE	
B	389 2 ST SE	123 AVE SE	131 AVE SE	416	1570 Farm Rd	2nd St SE	
B	390 2 ST SE	2 ST SE	E LK STEVENS RD	134	1589 S LK STEVENS RD	PURPLE PENNANT RD	
B	390 2 ST SE	2 ST SE	E LK STEVENS RD	416	1570 Farm Rd	2nd St SE	
	390 2 ST SE	2 ST SE	E LK STEVENS RD	417	507 Pennant	4th St NE	
	391 4 ST NE	N NYDEN FARMS RD	131 AVE NE	411	1584 131 AV NE	4 ST NE	
B	391 4 ST NE	N NYDEN FARMS RD	131 AVE NE	417	507 Pennant	4th St NE	
B	392 123 AVE SE	2 ST SE	MACHIAS CUTOFF	139	1571 123RD AV SE	MACHIAS CUTOFF	
B	392 123 AVE SE	2 ST SE	MACHIAS CUTOFF	416	1570 Farm Rd	2nd St SE	
B	393 8 ST SE	79 AVE SE	91 AVE SE	408	809 83rd Ave SE	8th St SE	
B	393 8 ST SE	79 AVE SE	91 AVE SE	419	510 91st Ave SE	8th St SE	
B	394 32 ST SE / 91 AVE SE	103 AVE SE	S LK STEVENS RD	398	1071 103rd Avenue SE	32nd Street SE	
B	394 32 ST SE / 91 AVE SE	103 AVE SE	S LK STEVENS RD	420	1918 SR 9	32nd St SE	
B	394 32 ST SE / 91 AVE SE	103 AVE SE	S LK STEVENS RD	421	1066 91 AV SE	S Lk Stevens Rd	
B	395 VERNON RD / 81 AVE NE/SE	LUNDEEN PARK WAY	SR 204	406	LUNDEEN PARK WY EXT (FUTURE)	VERNON RD	
B	395 VERNON RD / 81 AVE NE/SE	LUNDEEN PARK WAY	SR 204	422	1574 81st AV NE	Vernon Road	
B	395 VERNON RD / 81 AVE NE/SE	LUNDEEN PARK WAY	SR 204	423	1084 81st Ave. SE	SR 204	
C	189 WOODS CREEK RD	MONROE C/L	INGRAHAM RD (MONROE UGB)	154	351 INGRAHAM RD	WOODS CREEK RD	
C	189 WOODS CREEK RD	MONROE C/L	INGRAHAM RD (MONROE UGB)	155	2368 WOODS CREEK RD	SR 2	
C	190 M LK MONROE UGB	WOODS CREEK RD	DUBUQUE RD	153	41 STORM LAKE RD	DUBUQUE RD	
C	190 M LK MONROE UGB	WOODS CREEK RD	DUBUQUE RD	156	147 WAGNER RD	WOODS CREEK RD	
C	190 M LK MONROE UGB	WOODS CREEK RD	DUBUQUE RD	157	467 STORM LAKE RD	MERO RD	
C	193 88 ST SE/131 AVE SE	SR 2 OVERPASS	THREE LAKES RD	159	589 131ST AV SE	THREE LAKES RD	
C	193 88 ST SE/131 AVE SE	SR 2 OVERPASS	THREE LAKES RD	161	2003 SR 2 ON/OFF RAMPS (E SIDE)	88TH ST SE	
	194 S MACHIAS RD	SNOHOMISH C/L	SR 2	150	121 S MACHIAS RD	RITCHIE RD	
	194 S MACHIAS RD	SNOHOMISH C/L	SR 2	160	112 S MACHIAS RD	THREE LAKES RD	

		PRINT DATE		3/13/03					
SA	BN	ROAD NAME	FROM	TO	SR	SR	SR	SR	SR
C	195	WESTWICK RD (100 ST SE)	SR 2	171 AVE SE	162	2020	SR 2	WESTWICK RD	
	195	WESTWICK RD (100 ST SE)	SR 2	171 AVE SE	163	578	159TH AV SE	WESTWICK RD	
C	195	WESTWICK RD (100 ST SE)	SR 2	171 AVE SE	381	1031	167 AV SE	WESTWICK RD	
C	196	ROOSEVELT RD/159 AVE SE	MONROE UGB/ MONROE C/L	WESTWICK RD	163	578	159TH AV SE	WESTWICK RD	
C	196	ROOSEVELT RD/159 AVE SE	MONROE UGB/ MONROE C/L	WESTWICK RD	164	2026	SR 2	ROOSEVELT RD	
C	196	ROOSEVELT RD/159 AVE SE	MONROE UGB/ MONROE C/L	WESTWICK RD	165	601	159TH AV SE	ROOSEVELT RD	
C	196	ROOSEVELT RD/159 AVE SE	MONROE UGB/ MONROE C/L	WESTWICK RD	166	1837	ROOSEVELT RD	TROMBLEY RD	
C	197	OLD SNOHOMISH MONROE RD	SNOHOMISH UGB/ SNOHOMISH C/L	MONROE UGB	167	1440	SR 522	OLD SNOHOMISH MONROE RD	
C	197	OLD SNOHOMISH MONROE RD	SNOHOMISH UGB/ SNOHOMISH C/L	MONROE UGB	288	2032	LINCOLN AV	92 ST SE	
C	198	MARSH RD	LOWELL LARIMER RD	SR 9	169	465	SR 9	AIRPORT WAY/MARSH RD	
C	198	MARSH RD	LOWELL LARIMER RD	SR 9	170	460	MARSH RD	LOWELL-LARIMER RD	
C	198	MARSH RD	LOWELL LARIMER RD	SR 9	171	40	SEATTLE HILL RD	LOWELL-LARIMER RD	
C	199	LOWELL LARIMER RD	MARSH RD	EVERETT C/L	170	460	MARSH RD	LOWELL-LARIMER RD	
C	199	LOWELL LARIMER RD	MARSH RD	EVERETT C/L	171	40	SEATTLE HILL RD	LOWELL-LARIMER RD	
C	199	LOWELL LARIMER RD	MARSH RD	EVERETT C/L	172	45	SR-9	BROADWAY AV	
C	199	LOWELL LARIMER RD	MARSH RD	EVERETT C/L	173	1531	LOWELL-LARIMER RD	LOWELL SNOHOMISH RIVER RD	
C	235	AIRPORT WY	99 AVE SE	SNOHOMISH C/L	169	465	SR 9	AIRPORT WAY/MARSH RD	
C	235	AIRPORT WY	99 AVE SE	SNOHOMISH C/L	189	707	AIRPORT WY	LOWELL SNOHOMISH RIVER RD	
C	235	AIRPORT WY	99 AVE SE	SNOHOMISH C/L	390	782	AIRPORT WY	1ST ST	
C	235	AIRPORT WY	99 AVE SE	SNOHOMISH C/L	391	735	AIRPORT WY	2ND ST	
C	236	BICKFORD AVE	100' NW/83 AVE SE	SNOHOMISH C/L	284	2037	SR 2	Bickford Ave	
C	236	BICKFORD AVE	100' NW/83 AVE SE	SNOHOMISH C/L	285	627	BICKFORD AVE	52 ST SE/87 AV SE	
C	236	BICKFORD AVE	100' NW/83 AVE SE	SNOHOMISH C/L	286	359	BICKFORD AVE	56 ST SE/FOBES RD	
C	237	88TH ST SE / 92 ST SE	SR 2 OVERPASS	W END BRIDGE #633	287	2010	SR 2 ON/OFF RAMP (W SIDE)	92 ST SE	
C	237	88TH ST SE / 92 ST SE	SR 2 OVERPASS	W END BRIDGE #633	288	2032	LINCOLN AV	92 ST SE	
C	251	RIVERVIEW/HOMEACR ES/43	SNOHOMISH UGB	EBEY ISLAND RD	304	50	66 AV SE	60 ST SE	
C	251	RIVERVIEW/HOMEACR ES/43	SNOHOMISH UGB	EBEY ISLAND RD	305	551	FOSTER SLOUGH RD	60 ST SE	
C	251	RIVERVIEW/HOMEACR ES/43	SNOHOMISH UGB	EBEY ISLAND RD	306	1555	SR 9	RIVERVIEW RD	
C	251	RIVERVIEW/HOMEACR ES/43	SNOHOMISH UGB	EBEY ISLAND RD	433		SR 9 NB Ramp	Riverview	
C	252	66/SKIPLEY RD/52	60 ST SE	BICKFORD AVE	285	627	BICKFORD AVE	52 ST SE/87 AV SE	
C	252	66/SKIPLEY RD/52	60 ST SE	BICKFORD AVE	304	50	66 AV SE	60 ST SE	
C	252	66/SKIPLEY RD/52	60 ST SE	BICKFORD AVE	307	626	83 AV SE	SKIPLEY RD	
C	253	60 ST SE	FOSTER SLOUGH RD	83 AVE SE	305	551	FOSTER SLOUGH RD	60 ST SE	
C	253	60 ST SE	FOSTER SLOUGH RD	83 AVE SE	308	628	83 AVE SE	60 ST SE	
C	254	72/83 AVE SE	SNOHOMISH UGB/ 54 MI WEST OF C/L	52 ST SE (SKIPLEY RD)	307	626	83 AV SE	SKIPLEY RD	
C	254	72/83 AVE SE	SNOHOMISH UGB/ 54 MI WEST OF C/L	52 ST SE (SKIPLEY RD)	309	558	83 AVE SE	72 ST SE	
C	254	72/83 AVE SE	SNOHOMISH UGB/ 54 MI WEST OF C/L	52 ST SE (SKIPLEY RD)	310	986	89 AV SE	72 ST SE	
C	255	56 ST SE/107 AV ESE	BICKFORD AVE	SNOHOMISH C/L	286	359	BICKFORD AVE	56 ST SE/FOBES RD	
	257	OLD OWEN RD	MONROE UGB/ 0.88 MI FROM OAKS ST	WOODS LK RD	313	2052	OLD OWEN RD	SR 2	

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USAF UNIT	ROAD NAME	FROM	TO	USAF UNIT	ROAD NAME	FROM	TO
C	257 OLD OWEN RD	MONROE UGB/ 0.88 MI FROM OAKS ST	WOODS LK RD	314	449 FLORENCE ACRES RD	OLD OWEN RD	
	257 OLD OWEN RD	MONROE UGB/ 0.88 MI FROM OAKS ST	WOODS LK RD	315	1376 299 AV SE	SR 2	
C	257 OLD OWEN RD	MONROE UGB/ 0.88 MI FROM OAKS ST	WOODS LK RD	316	473 WOODS LK RD	OLD OWEN RD	
C	258 FLORENCE ACRES/WOODS L	OLD OWEN RD	OLD OWEN RD	314	449 FLORENCE ACRES RD	OLD OWEN RD	
C	258 FLORENCE ACRES/WOODS L	OLD OWEN RD	OLD OWEN RD	316	473 WOODS LK RD	OLD OWEN RD	
C	261 BROADWAY AVE	164 ST SE	SR 9	172	45 SR-9	BROADWAY AV	
C	261 BROADWAY AVE	164 ST SE	SR 9	197	427 BROADWAY AV / ELLIOT RD	164 ST SE	
C	263 164 ST SE	SR 9	BROADWAY AVE	197	427 RD	164 ST SE	
C	263 164 ST SE	SR 9	BROADWAY AVE	317	28 SR 9	164 ST SE	
C	267 CRESCENT LK/203 ST SE	HIGH BRIDGE RD	SR 203	213	363 HIGH BRIDGE RD	CRESCENT LK RD	
C	267 CRESCENT LK/203 ST SE	HIGH BRIDGE RD	SR 203	318	1913 SR 203	CRESCENT LK RD	
C	270 BEN HOWARD RD/311 AVE SE	SR 203	BRIDGE #429	319	2136 MANN RD /311 AV SE	SR 2	
C	270 BEN HOWARD RD/311 AVE SE	SR 203	BRIDGE #429	320	1450 SR 203	BEN HOWARD RD	
C	303 LOWELL SNOHOMISH RIVER RD	EVERETT C/L	SNOHOMISH UGB	173	1531 LOWELL-LARIMER RD	LOWELL SNOHOMISH RIVER RD	
C	303 LOWELL SNOHOMISH RIVER RD	EVERETT C/L	SNOHOMISH UGB	189	707 AIRPORT WY	LOWELL SNOHOMISH RIVER RD	
C	306 72 ST SE	SNOHOMISH UGB/ 0.54 MI FROM C/L	SR 9 OVERCROSSING	309	558 83 AVE SE	72 ST SE	
C	306 72 ST SE	SNOHOMISH UGB/ 0.54 MI FROM C/L	SR 9 OVERCROSSING	310	986 89 AV SE	72 ST SE	
C	307 LOWELL SNOHOMISH RIVER RD	SNOHOMISH UGB/ 0.54 MI FROM C/L	AIRPORT WY	189	707 AIRPORT WY	LOWELL SNOHOMISH RIVER RD	
C	324 DUBUQUE RD/LK ROESIGER RD	STORM LAKE RD	4 ST NE	144	721 CRESWELL RD	DUBUQUE RD	
C	324 DUBUQUE RD/LK ROESIGER RD	STORM LAKE RD	4 ST NE	153	41 STORM LAKE RD	DUBUQUE RD	
C	324 DUBUQUE RD/LK ROESIGER RD	STORM LAKE RD	4 ST NE	372	443 S LK ROESIGER RD	WOODS CREEK RD	
C	327 THREE LAKES RD	123 AVE SE (E 1/2)/SNOHOMISH C/L	171 AVE SE	160	112 S MACHIAS RD	THREE LAKES RD	
C	338 OLD SNOHOMISH-MONROE RD	161 AVE SE	MONROE C/L	167	1440 SR 522	OLD SNOHOMISH MONROE RD	
C	338 OLD SNOHOMISH-MONROE RD	161 AVE SE	MONROE C/L	429	SR 522 EB Ramps	Old Snohomish Monroe Rd	
C	347 OLD OWEN RD	MONROE C/L 13 MI. FROM SR 2	MONROE UGB/ .88 MI. FROM OAKS ST	313	2052 OLD OWEN RD	SR 2	
C	347 OLD OWEN RD	MONROE C/L 13 MI. FROM SR 2	MONROE UGB/ .88 MI. FROM OAKS ST	314	449 FLORENCE ACRES RD	OLD OWEN RD	
C	348 WOODS CREEK RD	INGRAHAM RD (MONROE UGB)	DUBUQUE RD	155	2368 WOODS CREEK RD	SR 2	
C	348 WOODS CREEK RD	INGRAHAM RD (MONROE UGB)	DUBUQUE RD	156	147 WAGNER RD	WOODS CREEK RD	
C	348 WOODS CREEK RD	INGRAHAM RD (MONROE UGB)	DUBUQUE RD	372	443 S LK ROESIGER RD	WOODS CREEK RD	
C	353 AIRPORT WY	SR 9	99 AVE SE	169	465 SR 9	AIRPORT WAY/MARSH RD	
C	353 AIRPORT WY	SR 9	99 AVE SE	208	2313 AIRPORT WAY	99TH	
C	375 THREE LAKES RD	S MACHIAS RD	SNOHOMISH C/L	160	112 S MACHIAS RD	THREE LAKES RD	
D	200 100 ST SE	EVERETT C/L	35 AVE SE	174	520 35 AV SE	100 ST SE	
D	200 100 ST SE	EVERETT C/L	35 AVE SE	175	154 27 AV SE	100 ST SE	
D	201 35 AVE SE	SR 96 (132 ST SE)	100 ST SE	174	520 35 AV SE	100 ST SE	
	201 35 AVE SE	SR 96 (132 ST SE)	100 ST SE	176	39 35 AV SE	116 ST SE	
	201 35 AVE SE	SR 96 (132 ST SE)	100 ST SE	177	36 35 AV SE	SR 96 (132 ST SE)	

		PRINT DATE		3/13/03					
SA	UNIT	ROAD NAME	FROM	TO	POST MILE	DIR	North/South	Street Name	East/West
D	202	SEATTLE HILL RD	35 AVE SE	SR 96	178	11	35 AV SE	SEATTLE HILL RD(MILL CK)	
	202	SEATTLE HILL RD	35 AVE SE	SR 96	179	37	SEATTLE HILL RD	SR 96 (132 ST SE)	
	202	SEATTLE HILL RD	35 AVE SE	SR 96	180	992	SEATTLE HILL RD	148 ST SE	
D	203	35 AVE SE	SEATTLE HILL RD	SR 96	177	36	35 AV SE	SR 96 (132 ST SE)	
D	203	35 AVE SE	SEATTLE HILL RD	SR 96	178	11	35 AV SE	SEATTLE HILL RD(MILL CK)	
D	204	35 AVE SE	168 ST SE	SEATTLE HILL RD	178	11	35 AV SE	SEATTLE HILL RD(MILL CK)	
D	204	35 AVE SE	168 ST SE	SEATTLE HILL RD	181	857	35 AV SE	168 ST SE	
D	204	35 AVE SE	168 ST SE	SEATTLE HILL RD	182	993	35 AV SE	156 ST SE	
D	206	180 ST SE	SR 527	35 AVE SE	183	2	35 AV SE	180 ST SE	
D	206	180 ST SE	SR 527	35 AVE SE	185	1329	SR 527	180 ST SE	
D	206	180 ST SE	SR 527	35 AVE SE	186	19	BROOK BLVD	180 ST SE	
D	218	164 ST SW/SE	I-5 (NB RAMPS)	MILL CREEK C/L	231	1962	SR 527	164 ST SE	
D	218	164 ST SW/SE	I-5 (NB RAMPS)	MILL CREEK C/L	232	100	CASCADIAN WY	164 ST SE	
D	218	164 ST SW/SE	I-5 (NB RAMPS)	MILL CREEK C/L	233	21	3 AV SE	164 ST SE	
D	218	164 ST SW/SE	I-5 (NB RAMPS)	MILL CREEK C/L	234	93	6 AV W	164 ST SW	
D	218	164 ST SW/SE	I-5 (NB RAMPS)	MILL CREEK C/L	235	22	LARCH WY	164 ST SW	
D	218	164 ST SW/SE	I-5 (NB RAMPS)	MILL CREEK C/L	236	20	MEADOW RD	164 ST SW	
D	218	164 ST SW/SE	I-5 (NB RAMPS)	MILL CREEK C/L	237	122	14 AV W	164 ST SW	
D	218	164 ST SW/SE	I-5 (NB RAMPS)	MILL CREEK C/L	238	2095	I-5 RAMPS (NB OFF/ON)	164 ST SW	
D	218	164 ST SW/SE	I-5 (NB RAMPS)	MILL CREEK C/L	239	101	NORTH RD	164 ST SW	
D	219	164 ST SW	LYNNWOOD C/L	I-5 (NB RAMPS)	238	2095	I-5 RAMPS (NB OFF/ON)	164 ST SW	
D	219	164 ST SW	LYNNWOOD C/L	I-5 (NB RAMPS)	240	2094	I-5 RAMPS (SB OFF/ON)	164 ST SW	
D	219	164 ST SW	LYNNWOOD C/L	I-5 (NB RAMPS)	241	604	ASH WY	164 ST SW	
D	219	164 ST SW	LYNNWOOD C/L	I-5 (NB RAMPS)	242	405	PARK AND RIDE	164 ST SW	
D	219	164 ST SW	LYNNWOOD C/L	I-5 (NB RAMPS)	243	1	36 AV W	164 ST SW	
D	219	164 ST SW	LYNNWOOD C/L	I-5 (NB RAMPS)	244	10	28 AVE W/ MANOR WAY	164 ST SW	
D	220	28 AVE W	164 ST SW	LYNNWOOD C/L	244	10	28 AVE W/ MANOR WAY	164 ST SW	
D	220	28 AVE W	164 ST SW	LYNNWOOD C/L	246	210	28 AVE W	SR 525 ON/OFF RAMPS	
D	220	28 AVE W	164 ST SW	LYNNWOOD C/L	247	2078	28 AVE W/ ALDERWOOD MALL PKWY	177 PL SW/MAPLE RD	
D	222	52 AVE W	LYNNWOOD C/L	148 ST SW	248	25	52 AVE W	148 ST SW	
D	222	52 AVE W	LYNNWOOD C/L	148 ST SW	249	1909	52 AVE W	168 ST SW	
D	223	52 AVE W/BEVERLY PARK	148 ST SW	MUKILTEO C/L	248	25	52 AVE W	148 ST SW	
D	223	52 AVE W/BEVERLY PARK	148 ST SW	MUKILTEO C/L	250	55	BEVERLY PARK	SHELBY/PICNIC PT RD	
D	223	52 AVE W/BEVERLY PARK	148 ST SW	MUKILTEO C/L	251	1774	BEVERLY PARK	LINCOLN WAY	
D	224	148 ST SW	52 AVE W	SR 99	248	25	52 AVE W	148 ST SW	
D	224	148 ST SW	52 AVE W	SR 99	252	414	SR 99	148 ST SW	
D	224	148 ST SW	52 AVE W	SR 99	253	1036	44 AV W	148 ST SW	
D	224	148 ST SW	52 AVE W	SR 99	254	527	40 AV W	148 ST SW	
D	224	148 ST SW	52 AVE W	SR 99	255	1040	48 AV W	148 ST SW	
D	225	148/150/JEFFERSON/MADISON	SR 99	ASH WY	252	414	SR 99	148 ST SW	
D	225	148/150/JEFFERSON/MADISON	SR 99	ASH WY	256	376	35 AV W	148 ST SW	
D	225	148/150/JEFFERSON/MADISON	SR 99	ASH WY	257	133	MANOR WY	148 ST SW	
D	225	148/150/JEFFERSON/MADISON	SR 99	ASH WY	258	848	JEFFERSON WY	148 ST SW	
D	225	148/150/JEFFERSON/MADISON	SR 99	ASH WY	259	424	MADISON WY	ASH WY	
D	227	BEVERLY PARK RD	SR 525	AIRPORT RD	260	417	SR 525	BEVERLY PARK RD	
D	227	BEVERLY PARK RD	SR 525	AIRPORT RD	261	401	BEVERLY PARK RD	121 ST SW	
D	227	BEVERLY PARK RD	SR 525	AIRPORT RD	262	425	BEVERLY PARK RD	GIBSON RD	
D	227	BEVERLY PARK RD	SR 525	AIRPORT RD	263	54	BEVERLY PARK RD	112 ST SW	
D	227	BEVERLY PARK RD	SR 525	AIRPORT RD	264	353	AIRPORT RD	HOLLY DR/BEVERLY PARK RD	
D	227	BEVERLY PARK RD	SR 525	AIRPORT RD	265	1189	BEVERLY PARK RD	CENTER RD	
D	228	AIRPORT/128 ST SW	SR 99	I-5 (SB RAMPS)	266	672	SR 99	AIRPORT RD	
D	228	AIRPORT/128 ST SW	SR 99	I-5 (SB RAMPS)	267	43	AIRPORT RD	ADMIRALTY WY	

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SA	RD	ROAD NAME	FROM	TO	COUNTY	IND	DE	North/South Street Name	East/West Street Name
D	228	AIRPORT/128 ST SW	SR 99	I-5 (SB RAMP)	268	588	GIBSON RD	128 ST SW	
D	228	AIRPORT/128 ST SW	SR 99	I-5 (SB RAMP)	269	34	4 AV W	128 ST SW	
	228	AIRPORT/128 ST SW	SR 99	I-5 (SB RAMP)	271	109	8 AV W	128 ST SW	
	228	AIRPORT/128 ST SW	SR 99	I-5 (SB RAMP)	272	944	I-5 RAMP SB	128 ST SW	
J	228	AIRPORT/128 ST SW	SR 99	I-5 (SB RAMP)	428		I-5 RAMP NB	128 ST SW	
D	229	4 AVE W	128 ST SW	112 ST SW	269	34	4 AV W	128 ST SW	
D	229	4 AVE W	128 ST SW	112 ST SW	273	90	4 AVE W	124 ST SW	
D	229	4 AVE W	128 ST SW	112 ST SW	274	89	4 AVE W	120 ST SW	
D	229	4 AVE W	128 ST SW	112 ST SW	275	33	4 AVE W	112 ST SW	
D	229	4 AVE W	128 ST SW	112 ST SW	276	352	4 AVE W	MARINER SQUARE	
D	230	112 ST SW	EVERETT C/L	EVERETT C/L	275	33	4 AVE W	112 ST SW	
D	230	112 ST SW	EVERETT C/L	EVERETT C/L	277	1965	7 AV SE	112TH ST SW	
D	230	112 ST SW	EVERETT C/L	EVERETT C/L	278	2088	SR 99	112TH ST SW	
				400 ft N/o 103 ST SW				HOLLY DR/BEVERLY	
D	231	AIRPORT RD	EVERETT C/L	(EVT)	264	353	AIRPORT RD	PARK RD	
				400 ft N/o 103 ST SW					
D	231	AIRPORT RD	EVERETT C/L	(EVT)	266	672	SR 99	AIRPORT RD	
				400 ft N/o 103 ST SW					
D	231	AIRPORT RD	EVERETT C/L	(EVT)	279	389	AIRPORT RD	100TH ST SW	
				400 ft N/o 103 ST SW					
D	231	AIRPORT RD	EVERETT C/L	(EVT)	282	99	AIRPORT RD	112 ST SW	
D	233	100 ST SW	AIRPORT RD	330 ft W/o 23 AVE W	279	389	AIRPORT RD	100TH ST SW	
				PAINE FIELD WY					
D	234	112 ST SW	BEVERLY PARK RD	(EVERETT C/L)	263	54	BEVERLY PARK RD	112 ST SW	
				PAINE FIELD WY					
D	234	112 ST SW	BEVERLY PARK RD	(EVERETT C/L)	282	99	AIRPORT RD	112 ST SW	
D	259	132 ST SE	SR 96 (SEATTLE HILL RD)	SNOHOMISH CASCADE DR	179	37	SEATTLE HILL RD	SR 96 (132 ST SE)	
D	259	132 ST SE	SR 96 (SEATTLE HILL RD)	SNOHOMISH CASCADE DR	193	1004	DRIVE	134th PL SE	
D	259	132 ST SE	SR 96 (SEATTLE HILL RD)	SNOHOMISH CASCADE DR	194	593	PUGET PARK DR	134 PI SE	
D	260	PUGET PARK DR	132 ST SE	SNOHOMISH CASCADE DR	194	593	PUGET PARK DR	134 PI SE	
				SNOHOMISH CASCADE DR					
	260	PUGET PARK DR	132 ST SE	SNOHOMISH CASCADE DR	195	2099	PUGET PARK DR	148TH ST SE	
				SNOHOMISH CASCADE DR					
D	260	PUGET PARK DR	132 ST SE	SNOHOMISH CASCADE DR	196	2114	DR	PUGET PARK DR	
		FISHER RD/NORMA							
D	284	BCH/148 ST SW	72 AVE W	52 AVE W	248	25	52 AVE W	148 ST SW	
		FISHER RD/NORMA							
D	284	BCH/148 ST SW	72 AVE W	52 AVE W	332	522	60 AVE W	148 ST SW	
D	285	PICNIC POINT RD	BEVERLY PARK RD	PUGET SOUND BLVD	250	55	BEVERLY PARK	SHELBY/PICNIC PT RD	
D	285	PICNIC POINT RD	BEVERLY PARK RD	PUGET SOUND BLVD	333	56	PICNIC POINT RD	140 ST SW	
D	285	PICNIC POINT RD	BEVERLY PARK RD	PUGET SOUND BLVD	334	871	MAPLEWOOD AV	PICNIC POINT RD	
								SHELBY/PICNIC PT RD	
D	286	SHELBY RD	SR 99	BEVERLY PARK RD	250	55	BEVERLY PARK	RD	
D	286	SHELBY RD	SR 99	BEVERLY PARK RD	335	1778	SR 99	SHELBY RD	
		LYNNWOOD C/L S/o 164 ST SW		SR 99					
D	287	36/35 AVE W	LYNNWOOD C/L S/o 164 ST SW	SR 99	243	1	36 AV W	164 ST SW	
D	287	36/35 AVE W	LYNNWOOD C/L S/o 164 ST SW	SR 99	256	376	35 AV W	148 ST SW	
D	287	36/35 AVE W	LYNNWOOD C/L S/o 164 ST SW	SR 99	337	622	35 AVE W	156 ST SW	
D	288	ASH WY	164 ST SW	MAPLE RD	241	604	ASH WY	164 ST SW	
							28 AVE W/ ALDERWOOD		
D	288	ASH WY	164 ST SW	MAPLE RD	247	2078	MALL PKWY	177 PL SW/ MAPLE RD	
D	288	ASH WY	164 ST SW	MAPLE RD	338	103	ASH WY	177 PL SW/ MAPLE RD	
D	289	ASH WY	164 ST SW	134 ST SW	241	604	ASH WY	164 ST SW	
D	289	ASH WY	164 ST SW	134 ST SW	259	424	MADISON WY	ASH WY	
D	289	ASH WY	164 ST SW	134 ST SW	339	594	ASH WY	134 ST SW	
D	290	MANOR WY	164 ST SW	SR 99	244	10	28 AVE W/ MANOR WAY	164 ST SW	
		290 MANOR WY	164 ST SW	SR 99	257	133	MANOR WY	148 ST SW	
		290 MANOR WY	164 ST SW	SR 99	340	2115	MANOR WY	SR 99	
		290 MANOR WY	164 ST SW	SR 99	341	420	ADMIRALTY WY	MANOR WY	

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SA	UNIT	STREET NAME	STREET NAME	TO	FROM	TO	FROM	STREET NAME	STREET NAME
D	290	MANOR WY	164 ST SW	SR 99	342	454	JEFFERSON WAY	MANOR WY	
D	291	ADMIRALTY WY	MANOR WY	AIRPORT RD	267	43	AIRPORT RD	ADMIRALTY WY	
	291	ADMIRALTY WY	MANOR WY	AIRPORT RD	341	420	ADMIRALTY WY	MANOR WY	
	291	ADMIRALTY WY	MANOR WY	AIRPORT RD	343	139	GIBSON RD	ADMIRALTY WY	
J	292	GIBSON RD	BEVERLY PARK RD	SR 99	262	425	BEVERLY PARK RD	GIBSON RD	
D	292	GIBSON RD	BEVERLY PARK RD	SR 99	344	1167	SR 99	GIBSON RD	
D	292	GIBSON RD	BEVERLY PARK RD	SR 99	345	423	ALEXANDER RD	GIBSON RD	
		GIBSON RD/134 ST/4							
D	293	AVE	SR 99	128 ST SW	269	34	4 AV W	128 ST SW	
		GIBSON RD/134 ST/4							
D	293	AVE	SR 99	128 ST SW	339	594	ASH WY	134 ST SW	
		GIBSON RD/134 ST/4							
D	293	AVE	SR 99	128 ST SW	343	139	GIBSON RD	ADMIRALTY WY	
		GIBSON RD/134 ST/4							
D	293	AVE	SR 99	128 ST SW	344	1167	SR 99	GIBSON RD	
		GIBSON RD/134 ST/4							
D	293	AVE	SR 99	128 ST SW	346	452	E GIBSON RD	GIBSON RD/ASH WAY	
D	294	E GIBSON RD	GIBSON RD	128 ST SW	268	588	GIBSON RD	128 ST SW	
		E GIBSON RD	GIBSON RD	128 ST SW	346	452	E GIBSON RD	GIBSON RD/ASH WAY	
D	295	MEADOW PL SE	164 ST SW	MERIDIAN AVE S	239	101	NORTH RD	164 ST SW	
		NORTH RD/2 PL W-							
D	295	MEADOW PL SE	164 ST SW	MERIDIAN AVE S	347	595	MERIDIAN AVE SE	MEADOW PL SE	
		NORTH RD/2 PL W-							
D	295	MEADOW PL SE	164 ST SW	MERIDIAN AVE S	348	481	CASCADIAN WY	146 ST SW	
		NORTH RD/2 PL W-							
D	295	MEADOW PL SE	164 ST SW	MERIDIAN AVE S	349	482	CASCADIAN WY	155 ST SE	
D	296	146 ST SW/SE	MEADOW RD	CASCADIAN WY	348	481	CASCADIAN WY	146 ST SW	
D	296	146 ST SW/SE	MEADOW RD	CASCADIAN WY	350	404	MEADOW RD	146 ST SW	
		MEADOW RD/MEADOW							
D	297	PL SW	146 ST SW	MERIDIAN AVE S	347	595	MERIDIAN AVE SE	MEADOW PL SE	
		MEADOW RD/MEADOW							
D	297	PL SW	146 ST SW	MERIDIAN AVE S	350	404	MEADOW RD	146 ST SW	
		MERIDIAN AVE S -3							
	298	AVE SE	MEADOW PL SW	SR 96	347	595	MERIDIAN AVE SE	MEADOW PL SE	
		MERIDIAN AVE S -3							
D	298	AVE SE	MEADOW PL SW	SR 96	351	125	3 AV SE	SR 96	
D	299	10 DR SE/ELGIN WAY	SR 96 (132 ST SE) (MILL CREEK C/L)	EVERETT C/L	352	587	ELGIN WAY	SR 96	
D	299	10 DR SE/ELGIN WAY	SR 96 (132 ST SE) (MILL CREEK C/L)	EVERETT C/L	353	1245	10 DR SE	WALTHAM DR	
D	299	10 DR SE/ELGIN WAY	SR 96 (132 ST SE) (MILL CREEK C/L)	EVERETT C/L	354	769	10th Dr SE	126th St SE	
D	299	10 DR SE/ELGIN WAY	SR 96 (132 ST SE) (MILL CREEK C/L)	EVERETT C/L	355	75	10 DR SE	118TH PL SE	
D	300	116 ST SE	EVERETT C/L	35 AVE SE	176	39	35 AV SE	116 ST SE	
D	300	116 ST SE	EVERETT C/L	35 AVE SE	356	1667	SR 527	116 ST SE	
				MERCHANT					
D	301	27 AVE SE-EL CAPITAN	110' S/o 96 St SE	WY(EVERETT C/L)	175	154	27 AV SE	100 ST SE	
				MERCHANT					
D	301	27 AVE SE-EL CAPITAN	110' S/o 96 St SE	WY(EVERETT C/L)	357	444	MONTE CRISTO DR	EL CAPITAN	
D	304	LARCH WY	164 ST SW	TSA F/ 178 ST SW	235	22	LARCH WY	164 ST SW	
D	304	LARCH WY	164 ST SW	TSA F/ 178 ST SW	359	1092	LARCH WY	178 ST SW	
		SNOHOMISH CASCADE							
D	310	DR	132 ST SE	PUGET PARK DR	193	1004	DRIVE	134th PL SE	
		SNOHOMISH CASCADE							
D	310	DR	132 ST SE	PUGET PARK DR	196	2114	DR	PUGET PARK DR	
D	329	LOWELL LARIMER RD	MARSH RD	EVERETT C/L	170	460	MARSH RD	LOWELL-LARIMER RD	
D	329	LOWELL LARIMER RD	MARSH RD	EVERETT C/L	171	40	SEATTLE HILL RD	LOWELL-LARIMER RD	
D	329	LOWELL LARIMER RD	MARSH RD	EVERETT C/L	172	45	SR-9	BROADWAY AV	
D	329	LOWELL LARIMER RD	MARSH RD	EVERETT C/L	173	1531	LOWELL-LARIMER RD	LOWELL SNOHOMISH RIVER RD	
	334	NORTH RD	JONATHON RD	164 ST SW	229	2304	NORTH RD	176 PL SW	
	334	NORTH RD	JONATHON RD	164 ST SW	230	9	NORTH RD	SR 524	
	334	NORTH RD	JONATHON RD	164 ST SW	239	101	NORTH RD	164 ST SW	

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WCA	UNIT	ROAD NAME	FROM	TO	UNIT	ROAD NAME	TO
D	336	35 AVE SE	GRANNIS RD	168 ST SE	181	857 35 AV SE	168 ST SE
D	336	35 AVE SE	GRANNIS RD	168 ST SE	183	2 35 AV SE	180 ST SE
	336	35 AVE SE	GRANNIS RD	168 ST SE	188	1009 35 AV SE	GRANNIS RD
	352	4 AVE W	112 ST SW	EVERETT CL	275	33 4 AVE W	112 ST SW
D	352	4 AVE W	112 ST SW	EVERETT CL	378	728 4 AVE W	108 ST SW
D	352	4 AVE W	112 ST SW	EVERETT CL	379	1973 4 AVE W	SR 99
D	360	148 ST SE	PUGET PARK DR	SEATTLE HILL RD	180	992 SEATTLE HILL RD	148 ST SE
D	360	148 ST SE	PUGET PARK DR	SEATTLE HILL RD	195	2099 PUGET PARK DR	148TH ST SE
D	361	AIRPORT RD	112 ST SW	1,350 ft N of SR 99 (EVT)	266	672 SR 99	AIRPORT RD
D	361	AIRPORT RD	112 ST SW	1,350 ft N of SR 99 (EVT)	282	99 AIRPORT RD	112 ST SW
D	366	121 ST SW	SR 525	BEVERLY PARK RD	261	401 BEVERLY PARK RD	121 ST SW
D	366	121 ST SW	SR 525	BEVERLY PARK RD	382	1212 SR 525	121 ST SW
E	205	180 ST SE	35 AVE SE	SW COUNTY UGB/.84 MI FROM 35 AVE SE	183	2 35 AV SE	180 ST SE
E	205	180 ST SE	35 AVE SE	SW COUNTY UGB/.84 MI FROM 35 AVE SE	184	1005 51 AV SE	180 ST SE
E	207	YORK RD/35 AVE SE	SR 524	164 ST SE	181	857 35 AV SE	168 ST SE
E	207	YORK RD/35 AVE SE	SR 524	164 ST SE	183	2 35 AV SE	180 ST SE
E	207	YORK RD/35 AVE SE	SR 524	164 ST SE	187	991 35 AV SE	169 ST SE
E	207	YORK RD/35 AVE SE	SR 524	164 ST SE	188	1009 35 AV SE	GRANNIS RD
E	207	YORK RD/35 AVE SE	SR 524	164 ST SE	191	24 YORK RD/39 AVE SE	SR 524
E	209	39 AVE SE	228 ST SE	SR 524	190	6 39 AV SE	228 ST SE
E	209	39 AVE SE	228 ST SE	SR 524	191	24 YORK RD/39 AVE SE	SR 524
E	209	39 AVE SE	228 ST SE	SR 524	393	760 39 AV SE	212 ST SE
E	211	WOODINVILLE RD	KING CO LINE	SR 522 (EB RAMP)	192	1440 WOODINVILLE RD	SR 522
E	262	180 ST SE	SR 9	BROADWAY AVE	199	608 BROADWAY AV	180 ST SE
E	262	180 ST SE	SR 9	BROADWAY AVE	200	1271 SR 9	180 ST SE
E	264	ELLIOTT RD(HIGH BRIDGE RD)	CRESCENT LK RD	FALES RD	211	445 FALES RD	ELLIOT ROAD
E	264	ELLIOTT RD(HIGH BRIDGE RD)	CRESCENT LK RD	FALES RD	213	363 HIGH BRIDGE RD	CRESCENT LK RD
	265	FALES/ELLIOT RD	SR 522	BROADWAY AVE	197	427 RD	164 ST SE
E	265	FALES/ELLIOT RD	SR 522	BROADWAY AVE	211	445 FALES RD	ELLIOT ROAD
E	265	FALES/ELLIOT RD	SR 522	BROADWAY AVE	212	2141 FALES RD	DOWNNEY RD
E	266	ECHO LK RD	SR 522	N ECHO LK RD	206	413 ECHO LAKE RD	SR-522
E	266	ECHO LK RD	SR 522	N ECHO LK RD	207	797 ECHO LAKE RD	LOST LAKE RD
E	268	HIGH BRIDGE RD	KING CO LINE	CRESCENT LK RD	213	363 HIGH BRIDGE RD	CRESCENT LK RD
E	269	PARADISE LK RD	MALTBY UGB/MALTBY CHRIST. E PROP LINE	KING CO LINE	209	1284 SR-522	PARADISE LK RD
E	271	228 ST SE	39 AVE SE	SW UGB/ 45TH AVE SE	190	6 39 AV SE	228 ST SE
E	271	228 ST SE	39 AVE SE	SW UGB/ 45TH AVE SE	202	697 45 AV SE	228 ST SE
E	272	228 ST SE	SW UGB/ 45TH AVE SE	SR 9	202	697 45 AV SE	228 ST SE
E	272	228 ST SE	SW UGB/ 45TH AVE SE	SR 9	203	31 SR 9	228 ST SE
E	330	BROADWAY AVE	MALTBY UGB/.05 MI N/o 200 ST SE	164 ST SE	197	427 RD	164 ST SE
E	330	BROADWAY AVE	MALTBY UGB/.05 MI N/o 200 ST SE	164 ST SE	199	608 BROADWAY AV	180 ST SE
E	330	BROADWAY AVE	MALTBY UGB/.05 MI N/o 200 ST SE	164 ST SE	210	428 BROADWAY AV	SR-524
E	331	164 ST SE	SR 9	BROADWAY AVE	197	427 RD	164 ST SE
E	331	164 ST SE	SR 9	BROADWAY AVE	317	28 SR 9	164 ST SE
E	350	180 ST SE	SW COUNTY UGB/.84 MI FROM 35 AVE SE	SR 9	184	1005 51 AV SE	180 ST SE
E	350	180 ST SE	SW COUNTY UGB/.84 MI FROM 35 AVE SE	SR 9	200	1271 SR 9	180 ST SE
E	350	180 ST SE	SW COUNTY UGB/.84 MI FROM 35 AVE SE	SR 9	204	165 INTERURBAN BLVD	180 ST SE
	350	180 ST SE	SW COUNTY UGB/.84 MI FROM 35 AVE SE	SR 9	205	169 SNOHOMISH AV	180 ST SE

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RS#	UNIT	ROAD NAME	SR#	TO	UNIT	ROAD NAME	SR#	TO	UNIT
	354	PARADISE LAKE RD	SR-522	MALTBY UGB/MALTBY CHRISTIAN E. PROP LINE	209	1284	SR-522	PARADISE LK RD	
	355	BROADWAY AVE	SR 524	MALTBY UGB/.05 MI N/o 200 ST SE	210	428	BROADWAY AV	SR-524	
E	212	228 ST SW	LOCUST WY	BOTHELL C/L	214	4	LOCUST WY	228 ST SW	
F	212	228 ST SW	LOCUST WY	BOTHELL C/L	215	144	14 AV W	228 ST SW	
F	212	228 ST SW	LOCUST WY	BOTHELL C/L	216	17	4TH AV W	228 ST SW	
F	214	LARCH WY	MLT C/L	CYPRESS WY	217	908	CYPRESS WY(N LEG)	LARCH WY	
F	214	LARCH WY	MLT C/L	CYPRESS WY	218	97	28 AV W	LARCH WY	
F	214	LARCH WY	MLT C/L	CYPRESS WY	219	415	POPLAR WAY	LARCH WY	
F	214	LARCH WY	MLT C/L	CYPRESS WY	220	42	LARCH WY	LARCH WY/212TH ST SW	
F	214	LARCH WY	MLT C/L	CYPRESS WY	221	1529	44 AVE W	212TH ST SW	
F	215	204 ST SW	44 AVE W	CYPRESS WY	222	497	44 AVE W	204 ST SW	
F	215	204 ST SW	44 AVE W	CYPRESS WY	223	615	LARCH WY	204 ST SW	
F	215	204 ST SW	44 AVE W	CYPRESS WY	224	13	POPLAR WAY	204 ST SW	
F	215	204 ST SW	44 AVE W	CYPRESS WY	225	614	CYPRESS WY	204 ST SW	
F	215	204 ST SW	44 AVE W	CYPRESS WY	325	515	28TH AV W	204 ST SW	
F	215	204 ST SW	44 AVE W	CYPRESS WY	383	1472	SR 9	204 ST NE	
F	216	214 ST SW/DAMSON RD	216 ST SW (BOTHELL C/L)	SR 524	226	438	DAMSON RD	LOGAN RD	
F	216	214 ST SW/DAMSON RD	216 ST SW (BOTHELL C/L)	SR 524	228	2151	4TH AV W	216TH ST SW	
F	216	214 ST SW/DAMSON RD	216 ST SW (BOTHELL C/L)	SR 524	230	9	NORTH RD	SR 524	
F	217	NORTH RD	SR 524	176 PL SW	229	2304	NORTH RD	176 PL SW	
F	217	NORTH RD	SR 524	176 PL SW	230	9	NORTH RD	SR 524	
F	273	LOCKWOOD RD	LOCUST WY	KING CO LINE	321	459	LOCUST WY	LOCKWOOD RD	
F	273	LOCKWOOD RD	LOCUST WY	KING CO LINE	322	976	14 AV W	LOCKWOOD RD	
F	274	LOCUST WY	KING CO LINE	228 ST SW	214	4	LOCUST WY	228 ST SW	
F	274	LOCUST WY	KING CO LINE	228 ST SW	321	459	LOCUST WY	LOCKWOOD RD	
F	275	CYPRESS WY	LARCH WY	SR 524	217	908	CYPRESS WY(N LEG)	LARCH WY	
F	275	CYPRESS WY	LARCH WY	SR 524	225	614	CYPRESS WY	204 ST SW	
F	275	CYPRESS WY	LARCH WY	SR 524	323	1434	CYPRESS WY	SR 524	
F	276	LOGAN RD	LARCH WY	DAMSON RD	217	908	CYPRESS WY(N LEG)	LARCH WY	
F	276	LOGAN RD	LARCH WY	DAMSON RD	226	438	DAMSON RD	LOGAN RD	
F	276	LOGAN RD	LARCH WY	DAMSON RD	324	886	LOCUST WAY	LARCH WY	
F	277	28 AVE W	LYNNWOOD C/L	LARCH WY	218	97	28 AV W	LARCH WY	
F	277	28 AVE W	LYNNWOOD C/L	LARCH WY	325	515	28TH AV W	204 ST SW	
F	277	28 AVE W	LYNNWOOD C/L	LARCH WY	326	2135	28TH AV W	ALDERWOOD MALL PKWY	
F	278	POPLAR WY	LYNNWOOD C/L	BRIER C/L	219	415	POPLAR WAY	LARCH WY	
F	278	POPLAR WY	LYNNWOOD C/L	BRIER C/L	224	13	POPLAR WAY	204 ST SW	
F	278	POPLAR WY	LYNNWOOD C/L	BRIER C/L	327	1526	POPLAR WY	ALDERWOOD MALL PKWY	
F	279	LARCH WY	204 ST SW	212 ST SW	220	42	LARCH WY	LARCH WY/212TH ST SW	
F	279	LARCH WY	204 ST SW	212 ST SW	223	615	LARCH WY	204 ST SW	
F	280	84 AVE W	234 PL SW	220 ST SW	328	1528	84 AVE W	220 ST SW	
F	280	84 AVE W	234 PL SW	220 ST SW	329	26	84 AVE W	228 ST SW	
F	281	228 ST SW	80 AVE W	95 PL W	329	26	84 AVE W	228 ST SW	
F	281	228 ST SW	80 AVE W	95 PL W	330	1527	92 AV W	228 ST SW	
F	281	228 ST SW	80 AVE W	95 PL W	331	2152	SR 99	228 ST SW	
F	305	LOCUST/CYPRESS WY	228 ST SW	LARCH WY	214	4	LOCUST WY	228 ST SW	
F	305	LOCUST/CYPRESS WY	228 ST SW	LARCH WY	217	908	CYPRESS WY(N LEG)	LARCH WY	
F	305	LOCUST/CYPRESS WY	228 ST SW	LARCH WY	360	437	LOCUST WY	CYPRESS WY	
F	305	LOCUST/CYPRESS WY	228 ST SW	LARCH WY	361	1039	LOCUST WY	VINE RD	
F	311	14 AVE W	228 ST SW	END	215	144	14 AV W	228 ST SW	
F	318	14 AVE W/CARTER RD	228 ST SW	LOCKWOOD RD	215	144	14 AV W	228 ST SW	
F	318	14 AVE W/CARTER RD	228 ST SW	LOCKWOOD RD	322	976	14 AV W	LOCKWOOD RD	
F	332	39 AVE SE	228 ST SE	SR 524	190	6	39 AV SE	228 ST SE	
F	332	39 AVE SE	228 ST SE	SR 524	191	24	YORK RD/39 AVE SE	SR 524	

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TSA	UNIT	ROAD NAME	FROM	TO	UNIT	ROAD NAME	FROM	TO	UNIT
F	332	39 AVE SE	228 ST SE	SR 524	393	760 39 AV SE	212 ST SE		
	333	228 ST SE	35 AVE SE/BOTHELL C/L	39 AVE SE	190	6 39 AV SE	228 ST SE		
	333	228 ST SE	35 AVE SE/BOTHELL C/L	39 AVE SE	373	519 35 AV SE	228 ST SE		
F	335	LARCH WAY	SR 524	TSA D/ 178 ST SW	359	1092 LARCH WY	178 ST SW		
F	335	LARCH WAY	SR 524	TSA D/ 178 ST SW	374	102 LARCH WAY	SR 524		
F	337	YORK RD/35 AVE SE	SR 524	GRANNIS RD	188	1009 35 AV SE	GRANNIS RD		
F	337	YORK RD/35 AVE SE	SR 524	GRANNIS RD	191	24 YORK RD/39 AVE SE	SR 524		
F	376	44 AVE W/HAZEL RD	LYNNWOOD C/L	204 ST SW	383	1472 SR 9	204 ST NE		
337	F	YORK RD/35 AVE SE	SR 524	GRANNIS RD	623	191 SR 524	YORK RD		
376	F	44 AVE W/HAZEL RD	LYNNWOOD C/L	204 ST SW	1472	383 204 ST SW	HAZEL RD		

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RoadName	From	To	Description	Estimate P#	Estimate D#
35 AV SE	132 ST SE (SR 96)	120 PL SE	Three lane urban design + bike lanes	E.03	W-08
35 AV SE	152 ST SE (Seattle Hill Rd)	132 ST SE (SR 96)	Three lane urban design + bike lanes	E.04	W-09A
35 AV SE	168th ST SE		Intersection Signalization	D.02.14	
39 AV SE	at 228 ST SE		Intersection Signalization	D.02.24	
39 AV SE	207 ST SE	204 SE (SR 524)	Realignment	D.20	W-14A
39 AV SE	SR 524		Intersection Signalization	Included in D.20	S-039
45 AV SE	at 228 ST SE		Intersection Signalization	D.02.15	
35 AV W	at 156th ST SW		Intersection Signalization	D.02.12	
112 ST SW	4 AV W	Everett C/L	Five lane urban design + bike lanes	E.07	W-22
112 ST SW	Everett C/L	4 AV W	Five lane urban design + bike lanes	E.07	W-21
Beverly Park Road	at SR 525		Intersection Improvements	E.08B	
Beverly Park Road	Airport Road	112 ST SW	Four lane urban section with bike lanes	E.18	
132 ST Ext	Snohomish Cascade Dr	SR 9	Four lane urban section with bike lanes	E.11	N-12
132 ST SE	Seattle Hill Rd	Snohomish Cascade Dr	Five lane urban design + bike lanes	E.10	W-58
148 ST SW	52 AV W	SR 99	Three lane urban design + bike lanes	D.08A	OS-11
148 ST SW	SR 99	35 AV W	Four lane urban design + bike lanes	D.08A	W-24
148 ST SW	at 35th AV W		Intersection Signalization and Improvements	D.08B	
164 ST SW	Spruce Way	Ash Way	Five lane urban design + bike lanes	E.12	W-25A
180th ST SE	at Brook Blvd		Intersection Signalization	D.02.13	
228th ST SE	at 35th AV SE		Intersection Signalization	City of Bothell Project	

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RoadName	From	To	Description	Project #	Project ID
228th ST SE	at 39th AV SE		Intersection Signalization		
Lundeen Park Way Ext	SR 9	SR 204	Three lane urban section with bike lanes	E.20	N-08
Marine Dr	19 AV NE	7 DR NW	Three lane urban design + bike lanes	D.15	W-41
Marine Dr	at Waterworks Road		Intersection Signalization	D.02.16	
Shoultes Road (108th ST NE)	at 51st AV NE		Intersection Signalization	D.02.04	
SR 525	I-5	SR 526	Five lane urban design		
SR 99	168th ST SW	148th ST SW	Seven lane urban design	E.34	

CONDUCTING FUTURE LEVEL-OF-SERVICE ANALYSIS

- Upon submittal, the application for a development required to do future level-of-service analysis must have all of the traffic study elements identified below clearly marked with the same headings as shown below (A – F) and in the same order.

___ A. Project Identification

Name of Project, Applicant's Name

Identify the preparer of the traffic study: Name, Address, Phone Number, E-Mail, FAX Number

___ B. Location and Access:

1. 8 1/2" by 11" vicinity map showing location of subject parcels and nearby arterials

2. Access Descriptions. Describe all possible access locations in broad terms as in the following example:

"One possible access will be from the west side of 4th AV W between 108th ST SW and 112th ST SW. Another possible access will be from the north side of 108th ST SW between 4th AV W and Meridian."

3. Access Scenarios. Describe the access scenario(s) used to evaluate level of service.

Option A. Access Worst-Case Scenario. Describe the "worst-case" access scenario in terms of impacts on the level-of-service of the road system. Use the same broad format for describing access as in the following example.

"In terms of impacts on the level-of-service of the road system, the worst case scenario would be if the only access was onto 108th ST SW between 4th AV W and Meridian."

Option B. Alternative Access Scenarios. Instead of describing one "worst-case" access scenario, an applicant may also do all of the level-of-service analysis for different access scenarios as in the following example:

Alternative One: Access Only from 4th AV W.

Alternative Two: Access Only from 108th ST SW.

Alternative Three: Access from both 4th AV W and 108th ST SW.

___ C. Trip Generation

1. Clearly identify all assumptions used for trip generation.

Calculate trip generation for the peak hours of the adjacent street system

Describe type of land use (e.g., SFR, MFR, retail, school, church,...)

Assume maximum Size (e.g., 100 lots, 10,000 square feet,...)

Other assumptions discussed at scoping meeting

2. Provide clear rationale for any trip reduction percentages proposed.

- *Transportation Demand Management (TDM)*
- *Passer By*
- *Internal Trip Capture*
- *Existing trips from site*
- *Other*

3. Number of Peak-Hour Trips. Calculate net, maximum, new, peak-hour trips generated for:

AM peak hour of adjacent road system

PM peak hour of adjacent road system

_____ Maximum AM peak-hour trips

_____ Maximum PM peak-hour trips

___ D. Trip Distribution and Assignment

1. Propose horizon year for traffic forecast if other than six years in the future.

Public Works will determine the expiration date for the certificate of concurrency for the subsequent application based on the analysis. In almost all cases this will be six years in the future. The applicant will be told if, for some reason, Public Works has determined that a different horizon year should be used. The applicant may propose a different horizon year, provide justification, and Public Works will consider it.

2. Determine trip distributions and assignments.

Use format for trip distributions (See instructions provided by Public Works)

List future network assumptions for year of proposed expiration date of certificate of concurrency

- DPW has identified County arterials for which a funding commitment is in place and which will be constructed within six years. (Attach copy of "Six-Year Network Assumptions" Provided by DPW.) That list also identifies other agency projects that DPW has identified, but should not be considered as a definitive list for other agency projects.
- List any other network assumptions. The applicant is ultimately responsible for identifying projects in other jurisdictions or WSDOT projects for which funding is committed and project completion will be within six years.

AM trip distribution and assignment

PM trip distribution and assignment

3. Determine Transportation Service Area (TSA). _____

___ E. Identify Critical Arterial Units and Critical Movements on Critical Arterial Units

1. Attach the list of critical arterial units for TSA provided by Public Works.
2. List any other critical arterial units identified by Public works on Traffic Study Scoping Sheet as needing analysis.

<i>Number</i>	<i>Name of Arterial</i>	<i>Limits (From / To)</i>

3. List all "impacted" critical arterial units.

"Impacted arterial unit" means that based on the development's peak-hour trip assignments, that 3 or more AM or PM peak-hour trips (PHT) are added to the arterial unit in one direction. For each impacted critical arterial unit, show the critical movement(s), e.g., AM NB, PM NB, AM SB, and/or PM SB. See sample list below for recommended format.

Sample List of Impacted Critical Arterial Units and Critical Movements

Arterial Unit ID#	Arterial Unit Description	Critical Movements	
		Peak Hour	Directions
332	39 th AV SE between 228 th ST SE and SR-524	AM	northbound and southbound
		PM	northbound and southbound
333	228 th ST SE between 39 th AV SE and 35 th AV SE	AM	eastbound and westbound
		PM	eastbound and westbound

F. Level of Service Analysis for Impacted Critical Arterial Unit Movements

1. List key Intersections for impacted critical arterial unit (indicate Intersection ID#, Major Leg, Minor Leg)

Sample List of Key Intersections for Impacted Critical Arterial Units

Arterial Unit ID#	Key Intersection ID#	Major Leg	Minor Leg
332	190	228 ST SE	39 AVE SE
	191	SR 524	39 AVE SE
	393	39 AVE SE	212 ST SE
333	190	228 ST SE	39 AVE SE
	373	35 AVE SE (BTHL)	228 ST SE

Counts

2. Obtain current AM and PM peak hour counts for each key intersection on impacted critical arterial units.

Attach count sheet (8 ½ by 11") with traffic study

Show source and date of count

Most counts are available from Maxine Ponds, Traffic Operations, (425) 388-3117, maxine.ponds@co.snohomsh.wa.us. If Maxine is not available, try Jean Rowe at (425)388-3488 extension 4532 or jean.rowe@co.snohomish.wa.us.

To request a count from Maxine or Jean provide the following information:

- Intersection ID#,
- TSA,
- Major Leg, and
- Minor Leg.

3. Attach copy of pipeline inventory reports obtained from Public Works for each key intersection. The information in the pipeline forecast report will be valid for ninety days from the date of the report, except as shown in the next section:

4. Adjustments to the Pipeline Inventory

1. *DPW will provide the developer with trip distributions from any other large developments (over 50 PHT) added to the inventory during the 90-day period. To be deemed concurrent, the subject developer will have to either add these other large developments to the forecast, or provide with the submittal of the traffic study other analysis showing that the additional trips will not cause the LOS to fall below the adopted standard, PROVIDED, the subject developer will not have to consider any other large developments whose concurrency inventory date is less than 30 days prior to the subject development's submittal date. The traffic study needs to document compliance with this section.*
2. *The applicant can propose subtractions from the pipeline Inventory with written supporting documentation. For example, a copy of a certificate of occupancy for a development showing that it was occupied as of the date of the traffic count for a particular key intersection.*

5. Traffic Volumes for Three Scenarios: Calculate traffic volumes for all turning movements at each key intersection for impacted critical arterial unit movement for three different scenarios:

1. *Current Traffic Volumes: Existing traffic volumes from recent counts*
2. *Future Traffic Volumes without Development: Existing traffic volumes plus future traffic volumes from the pipeline inventory*
3. *Future Traffic Volumes with Development: Existing traffic volumes plus future traffic volumes from the pipeline inventory plus future traffic volumes from the development.*

6. Show future traffic volumes in tabular format as in the following example.

Future Traffic Volumes for Intersection #169, SR-9 @ Marsh Road, AM Peak Hour												
Intersection ID# 169	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Current Counts	25	35	22	54	65	18	38	156	65	25	458	237
Pipeline Forecasts	5	7	4	11	13	4	8	31	13	5	92	47
Subtotal (Total without Project)	30	42	26	65	78	22	46	187	78	30	550	284
Project Trips	0	2	0	4	6	2	0	0	3	1	0	0
Total Forecast with Project	30	44	26	69	84	24	46	187	81	31	550	284

7. Show classification of impacted critical arterial unit (provided by County)

(e.g., Cat 2 > 40, Cat 1 Sub, etc.)

8. Determine which LOS standard applies to each impacted critical arterial unit.

For urban arterial units the following applies:

Category	RU	DESCRIPTION	LOS A	LOS B	LOS C	LOS D	LOS E	LOS F
Cat 1 Urb	Urban	Category 1, Urban	>= 30	>= 24	>= 18	>= 14	>= 10	< 10
Cat 1 Sub	Urban	Category 1, Suburban	>= 35	>= 28	>= 22	>= 17	>= 13	< 13

For Rural Arterial Units see Attachment C to Procedure 4210 available from DPW.

9. Describe methodology and/or software to be used for each impacted critical arterial unit

- ☐ *Synchro*
☐ *Highway Capacity Software*
☐ *Other with written permission of Concurrency Manager* _____

10. For each impacted critical arterial unit movement, estimate current average peak hour directional travel speeds based on travel time studies using average car method. Attach copy of summary sheet. Will be provided by Public Works if available. Contact Jean Rowe at (425)388-3488 extension 4532 or jean.rowe@co.snohomish.wa.us or alternatively contact Maxine Ponds, Traffic Operations, (425) 388-3117, maxine.ponds@co.snohomish.wa.us

11. Demonstrate the calibration of current conditions.

Base the link speeds in the arterial LOS models (e.g. SYNCHRO "Flow Speed") on measured speeds between intersections from the travel time studies discussed in step 10 above as opposed to posted speed. Free-flow speeds (50th percentile speeds) may be used absent better information.

Research, document and use in the modeling the current signal phasing and timing for any key intersections that are already signalized. Contact Jean Rowe at (425)388-3488 extension 4532 or jean.rowe@co.snohomish.wa.us or alternatively contact Maxine Ponds, Traffic Operations, (425) 388-3117, maxine.ponds@co.snohomish.wa.us

Provide DPW with worksheets showing final calibrated base run and network assumptions. Note: for some arterial units with significant improvements programmed for the next six years, (e.g., 35th AV SE from SR-96 to Seattle Hill Road), and with prior approval from Public Works, a "qualitative" calibration of existing conditions may be acceptable.

12. Estimate future travel speeds for:

Future Traffic Volumes without Development: Existing traffic volumes plus future traffic volumes from the pipeline inventory

Future Traffic Volumes with Development: Existing traffic volumes plus future traffic volumes from the pipeline inventory plus future traffic volumes from the development.

13. Document the assumptions and results. Provide the applicable reports from the modeling software including, but not limited to:

*Intersection reports for key intersections.
Arterial-level reports*

14. Provide the final LOS model in electronic format (e.g., Synchro model for the different scenarios)

15. Summarize level-of-service (LOS) determination for all three scenarios. Indicate whether or not LOS meets the adopted County standard.

Sample Table Showing LOS Determinations

LOS Determination Scenario Three: Future Volumes with Development								
Arterial Unit ID#	Critical Peak Hours	Critical Directions	Category of Arterial Unit	LOS Standard	Speed Threshold to Achieve	Estimated Travel Speed (miles per hour)	Meet or Exceed Standard?	Estimated Level of Service

					LOS Standard	hour)		
332	AM	Northbound	Cat 1 Sub	LOS E	>= 13	25	Yes	LOS C
		Southbound	Cat 1 Sub	LOS E	>= 13	15	Yes	LOS E
	PM	Northbound	Cat 1 Sub	LOS E	>= 13	10	No	LOS F
		Southbound	Cat 1 Sub	LOS E	>= 13	35	Yes	LOS A

PRINT DATE: 3/13/03

* means may be critical and "X" means is critical
(future LOS analysis needed either way), "AUIA"
means in arrears

TSA	UNIT #	ARTERIAL UNIT NAME	R/U	AM nb/eb	AM sb/wb	PM nb/eb	PM sb/wb
A	147	67 AV NE from 108 ST NE to 2020' S/O SR 531	R		*		*
A	138	140 ST NE/NW from 46 AV NW to 23 AV NE	R	*		*	
A	139	140/Stimpson/136 ST NE from 23 AV NE to Marysville C/L	R	X		X	
A	163	Marine DR from 19th AV NE to I-5	U			X	
A	102	Pioneer Highway from 300 ST NW to Sno/Skagit C/L	R		*		*

TSA	UNIT #	ARTERIAL UNIT NAME	R/U	AM nb/eb	AM sb/wb	PM nb/eb	PM sb/wb
B	238	20 ST SE from SR 204 to SR 9	U		*	X	
B	316	20 ST SE from SR 9 to S Lk Stevens Rd	U		AUIA		X
B	317	91 AVE SE from 20 ST SE to SR-204	U	*	*	X	X
B	256	Bunk Foss Road from South Machias to SR-9	R	X	AUIA	X	AUIA
B	175	Lake View Dr/20th from Lundeen Pk Wy To Lk Stevens C/L	U		*		*
B	172	Lundeen Park Wy from SR 9 to Callow Rd	U		*		*
B	180	Machias Cut-Off/S Mach Rd from Lk Stev UGB to OK Mill	R		*		*
B	181	Ok Mill/Creswell Rd from S Machias Rd to Dubuque Rd	R		*		*
B	187	S Machias Rd from SR 2 to Machias Cutoff	R		*		*
B	342	Vernon Rd from Lundeen Parkway to Lake Stevens C/L	U		*		

TSA	UNIT #	ARTERIAL UNIT NAME	R/U	AM nb/eb	AM sb/wb	PM nb/eb	PM sb/wb
C	237	92 ST SE from 88 ST SE to W end Bridge #633	R			X	
C	235	Airport Way from 99th AV SE to Snohomish C/L	U			X	
C	353	Airport Way from 99th AV SE to SR-9	U		AUIA	X	AUIA
C	261	Broadway AV from 164 ST SE to SR 9	R			*	
C	307	Lowell Sno.River Rd from Snohomish UGB to Airport Wy	U			*	
C	198	Marsh Rd from Lowell Larimer Rd to SR 9	R	X		X	

PRINT DATE: 3/13/03

* means may be critical and "X" means is critical
(future LOS analysis needed either way), "AUIA"
means in arrears

TSA	UNIT #	ARTERIAL UNIT NAME	R/U	AM nb/eb	AM sb/wb	PM nb/eb	PM sb/wb
D	352	4 AVE W from 112 ST SW to EV C/L	U		X		X
D	229	4 AVE W from 128 ST SW to 112 ST SW	U		X		X
D	204	35 AV SE from 168 ST SE to Seattle Hill Rd	U			X	
D	203	35 AV SE from Seattle Hill Rd to SR 96	U			X	
D	336	35th AV SE from Grannis Road to 168th ST SE	U	*		*	
D	287	36 AV W/35 AV W from Lynnwood C/L to SR 99	U		*		*
D	230	112 ST SW from Everett C/L to Everett C/L	U			X	X
D	259	132 ST SE from Snoh Cascade Drive to Seattle Hill Road	U		X		X
D	219	164 ST SW from Lynnwood C/L to I-5 (NB Ramps)	U	X	*	X	X
D	228	Airport Road/128 ST SW from SR-99 to I-5	U				X
D	227	Beverly Park Rd from SR 525 to Airport Rd	U				X
D	202	Seattle Hill Road from 35th AV SE to 132nd ST SE	U			X	

TSA	UNIT #	ARTERIAL UNIT NAME	R/U	AM nb/eb	AM sb/wb	PM nb/eb	PM sb/wb
E	262	180 ST SE from SR 9 to Broadway AV	R	X	AUIA	X	AUIA
E	350	180 ST SE from SW County UGB to SR-9	R	X		AUIA	
E	272	228 ST SE from SW UGB/ 45th AV SE to SR 9	R	AUIA		AUIA	
E	330	Broadway AV from Maltby UGB to 164 ST SE	R		*		*
E	354	Paradise Lake Road from Maltby UGB to SR-522	U		X		X

TSA	UNIT #	ARTERIAL UNIT NAME	R/U	AM nb/eb	AM sb/wb	PM nb/eb	PM sb/wb
F	333	228th ST SE from Bothell C/L (35 AV SE) to 39th AV SE	U		X		X
F	215	Hazel Rd/204 ST SW from 44 AV W to Cypress Wy	U	*	*	*	*
F	214	Larch Way from MTLK C/L to Cypress Way	U			X	
F	278	Poplar Wy from Lynnwood C/L to Larch Wy	U	*		*	

SA	INT	ROAD NAME	FROM	TO	TYPE	Category	Main Road
A	101	OLD PACIFIC HWY	STANWOOD UGB/276 ST NW	PIONEER HWY	R	Category 2, > 40 mph	C
A	102	PIONEER HIGHWAY	300 ST NW	SNO/SKAGIT COUNTY LINE	R	Category 2, > 40 mph	C
A	103	300 ST NW	PIONEER HWY	STANWOOD UGB/42 MI. E. OF PIONEER HWY	R	Category 2, > 40 mph	C
A	104	PIONEER HIGHWAY	STANWOOD C/L	300 ST NW	R	Category 2, > 40 mph	C
A	105	300 ST NW	STANWOOD UGB/42 MI. E/O PIONEER HWY	OLD 99 N	R	Category 2, > 40 mph	C
A	106	76 AVE NW	300 ST NW	SNO CO LINE/332 ST NW	R	Category 2, > 40 mph	C
A	107	68 AVE NW	STANWOOD UGB/0.6 MI S/O 300 ST NW	332 ST NW	R	Category 2, > 40 mph	C
A	108	68/70/72 AVE NW	276 ST NW	STANWOOD UGB/0.6 MI SO OF 300 ST NW	R	Category 2, <= 40 mph	C
A	109	300 ST NE/NW	OLD 99 N	15 AVE NE	R	Category 2, <= 40 mph	C
A	110	28 AVE NW	OLD 99 N	SR 532	R	Category 2, <= 40 mph	C
A	111	OLD 99 N/12 AV NW	SR 532	300 ST NW	R	Category 2, > 40 mph	C
A	112	268 ST NE/15 AV NE	300 ST NE	STANWOOD BRYANT RD	R	Category 2, <= 40 mph	C
A	113	STANWOOD BRYANT RD	I-5 N-BND ON/OFF RAMP	SR 9	R	Category 2, > 40 mph	C
A	114	SUNDAY LK RD	12 AVE NW	SR 532	R	Category 2, <= 40 mph	C
A	115	W SUNDAY LK RD	SR 532	25 AVE NW	R	Category 2, <= 40 mph	C
A	116	GRANDVIEW RD	SR 9	115 AVE NE	R	Category 2, <= 40 mph	C
A	117	PIONEER HIGHWAY E	I-5/S-BND ON/OFF RAMP	STANWOOD UGB/ STANWOOD C/L	R	Category 2, > 40 mph	C
A	118	MARINE DR	LAKEWOOD RD	STANWOOD UGB/ STANWOOD C/L	R	Category 2, > 40 mph	C
A	119	NORMAN RD/236 ST NE/NW	MARINE DR	I-5	R	Category 2, <= 40 mph	C
A	120	236 ST/19 AVE/252 ST NE	I-5/N-BND ON RAMP	SR 9	R	Category 2, > 40 mph	C
A	121	JIM CREEK RD	SR 530	LK RILEY RD	R	Category 2, > 40 mph	C
A	122	115 AVE NE	SR 530	228 ST NE	R	Category 2, <= 40 mph	C
A	123	ARL HTS/WALLITNER RD	JORDAN RD	JIM CREEK RD	R	Category 2, > 40 mph	C
A	124	HAPPY HOLLOW/VALLEY	MARINE DR	PIONEER HWY	R	Category 2, <= 40 mph	C
A	125	FRANK WATERS RD	LAKEWOOD RD	MARINE DR	R	Category 2, > 40 mph	C
A	126	40 AVE NW-HAPPY VALLEY	SR 531 (LAKEWOOD RD)	220 ST NW	R	Category 2, > 40 mph	C
A	127	3 AVE NE-SILL RD	SR 531 (172 ST NE)	PIONEER HWY	R	Category 2, > 40 mph	C
A	128	SMOKEY PT BLVD	188 ST NE	200 ST NE	U	Category 1, Suburban	E
A	131	MARINE DR	64 ST NW	LAKEWOOD RD(188 ST NW)	R	Category 2, > 40 mph	C
A	132	LAKEWOOD RD	MARINE DR	SR 531	R	Category 2, > 40 mph	C
A	133	W LK GOODWIN RD	46 AVE NW	LAKEWOOD RD	R	Category 2, <= 40 mph	C
A	134	E LK GOODWIN/46 AVE NW	140 ST NW	WENBERG ST PK ENT	R	Category 2, <= 40 mph	C
A	135	16 AVE NW/WILLOW/MCRAE	140 ST NW	SR 531	R	Category 2, <= 40 mph	C
A	136	23 AVE NE/FORTY-FIVE	140 ST NW	SR 531	R	Category 2, > 40 mph	C
A	137	KAYAK PT RD/140 ST NW	MARINE DR	46 AVE NW	R	Category 2, > 40 mph	C
A	138	140 ST NE/NW	46 AVE NW	23 AVE NE	R	Category 2, > 40 mph	C
A	139	140/STIMPSON/136 ST NE	23 AVE NE	MARYSVILLE C/L	R	Category 2, > 40 mph	C
A	141	152 ST NE	MARYSVILLE C/L	51 AVE NE	R	Category 2, > 40 mph	C
A	142	51 AVE NE	S. OF 152ND ST NE (MARYSVILLE C/L)	2063.05' S/O SR 531	R	Category 2, <= 40 mph	C
A	143	136 ST NE	MARYSVILLE C/L	51 AVE NE	U	Category 1, Suburban	E
A	144	SHOULTES/51 AVE NE	MARYSVILLE C/L	136 ST NE	U	Category 1, Suburban	E
A	145	108 ST NE	51 AVE NE	67 AVE NE	U	Category 1, Suburban	E
A	146	132 ST NE	51 AVE NE	ARL-MARY UGB/ E/O 58TH DR NE	U	Category 1, Suburban	E
A	147	67 AVE NE	108 ST NE	2020' S/O SR 531	R	Category 2, > 40 mph	C
A	148	100 ST NE	MARYSVILLE C/L	67 AVE NE	U	Category 1, Suburban	E
A	149	88 ST NE	MARYSVILLE C/L	MARYSVILLE C/L	U	Category 1, Suburban	E
A	150	132 ST NE/99 AVE NE	SR 9	116 ST NE	R	Category 2, <= 40 mph	C
A	152	84 ST NE	MARYSVILLE C/L	SR 9	U	Category 1, Suburban	E
A	161	MARINE DR	19 AVE NE	64 ST NW	R	Category 2, > 40 mph	C
A	162	27 AVE NE	MARINE DR NE	END OF CO RD	R	Category 2, <= 40 mph	C
A	163	MARINE DR NE	I-5	19 AVE NE	U	Category 1, Suburban	E
A	165	71/67 AVE NE/44 ST NE	SOPER HILL RD	MARYSVILLE C/L	R	Category 2, <= 40 mph	C
A	168	SOPER HILL RD	71 AVE NE	SR 9	U	Category 1, Suburban	E
A	239	67 AVENE	MARYSVILLE C/L	108 ST NE	U	Category 1, Suburban	E
A	240	DETLING RD	PIONEER HWY (STAN UGB) / 300 ST NW	OLD PACIFIC HWY	R	Category 2, <= 40 mph	C
A	241	152 ST NE	51 AVE NE	67 AVE NE	R	Category 2, > 40 mph	C

TSA	UNIT	ROAD NAME	FROM	TO	R/R	Category	Minimum KIOS
A	242	108 ST NE	67 AVE NE	SR 9	R	Category 2, > 40 mph	C
A	243	132 ST NE	ARL-MARY UGB/ E/o 58TH DR NE	67 AVE NE	R	Category 2, <= 40 mph	C
A	248	34 AVE NE	116 ST NE	136 ST NE	R	Category 2, > 40 mph	C
A	249	188 ST NE/47 AV NE	SMOKEY PT BLVD	S. OF 196TH PL NE (ARLINGTON C/L)	R	Category 2, > 40 mph	C
A	250	47/48 DR NE	MARYSVILLE C/L	84 ST NE	U	Category 1, Suburban	E
A	320	JORDAN/ARLINGTON HTS	SR 530	TSA B/ 0.67 MI N/o 148 ST NE (PVT RD)	R	Category 2, > 40 mph	C
A	321	BURN RD	ARLINGTON UGB/ 1 MI S/o OLD BURN RD	JORDAN TRAILS RD	R	Category 2, > 40 mph	C
A	339	CEMETERY RD	ARLINGTON C/L	ARLINGTON C/L (204 ST NE)	R	Category 2, > 40 mph	C
A	349	MT LOOP HWY	MT LOOP HWY (USFS)-END OF PAVEMENT	DARRINGTON C/L	R	Category 2, > 40 mph	C
A	357	SMOKEY PT BLVD	200 ST NE	SR 530	R	Category 2, > 40 mph	C
A	359	51 AVE NE	136TH ST NE	S/o 152ND ST NE (MARYSVILLE C/L AT RR XING)	U	Category 1, Suburban	E
A	362	51 AVE NE	1394.41' S/o SR 531	SR 531	R	Category 2, > 40 mph	C
B	129	JORDAN RD	GRANITE FALLS UGB/ .04 MI S/o BERGAN RD	TSA A/ 0.67 MI N/o 148 ST NE (PVT RD)	R	Category 2, > 40 mph	C
B	130	159 AVE NE/BURN RD	100 ST NE	SERVICE RD	R	Category 2, > 40 mph	C
B	151	99 AVE NE	84 ST NE	132 ST NE	R	Category 2, <= 40 mph	C
B	153	84 ST NE	SR 9	SR 92	R	Category 2, > 40 mph	C
B	154	123 AVE NE/44 ST NE	SR 92	84 ST NE	R	Category 2, <= 40 mph	C
B	155	100 ST NE	159 AVE NE	GRANITE FALLS UGB/ 0.3 MI W/o GRANITE FALLS C/L	R	Category 2, <= 40 mph	C
B	156	163 AVE NE	84 ST NE	100 ST NE	R	Category 2, <= 40 mph	C
B	157	MT LOOP HWY	GRANITE FALLS UGB	MONTE CRISTO RD	R	Category 2, > 40 mph	C
B	158	LK ROESIGER/MENZEL LAKE RD	4 ST NE / TSA B & C BOUNDARY	GRANITE FALLS UGB/ 0.36 MI NW/o WAITE RD	R	Category 2, > 40 mph	C
B	159	ROBE MENZEL RD	GRANITE FALLS UGB	SCHERRER RD	R	Category 2, > 40 mph	C
B	160	NEWBERG RD-ROBE MENZEL	OK MILL RD	SCHERRER RD	R	Category 2, <= 40 mph	C
B	164	SUNNYSIDE BLVD	SOPER HILL RD	MARYSVILLE C/L	R	Category 2, <= 40 mph	C
B	166	SUNNYSIDE BLVD	LK STEVENS UGB/ 0.75 MI N/o VERNON RD	SOPER HILL RD	R	Category 2, > 40 mph	C
B	167	83 AVE NE	SOPER HILL RD	END	R	Category 2, <= 40 mph	C
B	169	LUNDEEN PARK WY EXT	SR 9	END	U	Category 1, Suburban	E
B	170	SOPER HILL RD	LUNDEEN PARK WY	SR 9	U	Category 1, Suburban	E
B	172	LUNDEEN PARK WY	SR 9	CALLOW RD	U	Category 1, Suburban	E
B	173	99 AVE NE	SR 92	LUNDEEN PARK WY	R	Category 2, <= 40 mph	C
B	174	CALLOW RD	LUNDEEN PARK WY	SR 92	R	Category 2, > 40 mph	C
B	175	LAKE VIEW DR/20 ST NE	LUNDEEN PARK WY	LK STEVENS C/L	U	Category 1, Suburban	E
B	176	S/N MACHIAS RD	OK MILL RD	LK STEVENS UGB	R	Category 2, > 40 mph	C
B	177	S/E LK STEVENS RD	MACHIAS CUTOFF	LK STEVENS C/L	U	Category 1, Suburban	E
B	178	S/N DAVIES RD	S LK STEVENS RD	VERNON RD	U	Category 1, Suburban	E
B	179	S LK STEV/MACHIAS CUT-OFF RD	20 ST SE	LK STEVENS UGB	U	Category 1, Suburban	E
B	180	MACHIAS CUT-OFF/S MACHIAS RD	LK STEVENS UGB	OK MILL RD	R	Category 2, <= 40 mph	C
B	181	OK MIL/CRESWELL RD	S MACHIAS RD	DUBUQUE RD	R	Category 2, <= 40 mph	C
B	182	CARLSON RD/171 AVE SE	OK MILL RD	THREE LAKES RD/TSA BOUNDARIES B/C	R	Category 2, <= 40 mph	C
B	183	20 ST SE/WILLIAMS RD	S LK STEVENS RD	LK STEVENS UGB/ 0.14 MI NW/o 124 AVE SE	U	Category 1, Suburban	E
B	184	S LK STEVENS RD	87 AVE SE	LK STEVENS UGB/ .21 MI NE/o 91 AVE SE	R	Category 2, <= 40 mph	C
B	185	CAVALERO/S LK STEVENS RD	LK STEVENS UGB	87 AVE SE	R	Category 2, > 40 mph	C
B	187	S MACHIAS RD	SR 2	MACHIAS CUTOFF	R	Category 2, > 40 mph	C
B	188	DUBUQUE RD	S MACHIAS RD	STORM LK RD	R	Category 2, > 40 mph	C
B	191	139 AVE SE	THREE LAKES RD	DUBUQUE RD	R	Category 2, > 40 mph	C
B	192	THREE LAKES RD	123 AVE SE (E 1/2)/SNOHOMISH C/L	171 AVE SE	R	Category 2, > 40 mph	C
B	238	20 ST SE	SR 204	SR 9	U	Category 1, Suburban	E
B	244	SUNNYSIDE BLVD	SR 204	LK STEVENS UGB/ .75 MI N/o VERNON RD	R	Category 2, > 40 mph	C
B	245	S LK STEVENS RD	LK STEVENS UGB/ .21 MI NE/o 91 AVE SE	20 ST SE	R	Category 2, <= 40 mph	C
B	256	BUNK FOSS RD	SR 9	S MACHIAS RD	R	Category 2, <= 40 mph	C

LINE	ROAD NAME	FROM	TO	TYPE	Category	Minimum LOS
B 308	N MACHIAS RD	SR 92	LK STEVENS UGB/ 12 ST SE	R	Category 2, > 40 mph	C
B 309	WILLIAMS RD	LK STEVENS UGB/ 315 FT NW/0 124 AVE SE	MACHIAS CUTOFF	R	Category 2, =< 40 mph	C
B 313	4 ST NE	92 AVE NE	99 AVE NE	U	Category 1, Suburban	E
B 314	99 AVE SE/NE	20 ST SE	4 ST NE	U	Category 1, Suburban	E
B 315	92 AVE NE	SR 204	4 ST NE	U	Category 1, Suburban	E
B 316	20 ST SE	SR 9	S LK STEVENS RD	U	Category 1, Suburban	E
B 317	91 AVE SE	20 ST SE	SR 204	U	Category 1, Suburban	E
B 323	DUBUQUE RD/LK ROESIGER RD	STORM LAKE RD	4 ST NE/ TSA B AND C BOUNDARIES	R	Category 2, > 40 mph	C
B 325	SOPER HILL RD	71 AVE NE	SR 9	U	Category 1, Suburban	E
B 328	STORM LK RD	MERO RD	DUBUQUE RD	R	Category 2, =< 40 mph	C
B 342	VERNON RD	LUNDEEN PARKWAY	LAKE STEVENS C/L	U	Category 1, Suburban	E
B 343	MENZEL LK RD	GRANITE FALLS UGB	GRANITE FALLS C/L	R	Category 2, > 40 mph	C
B 344	100 ST NE	GRANITE FALLS C/L	300 MI. W OF GRANITE FALLS C/L	R	Category 2, > 40 mph	C
B 346	ROBE MENZEL RD	GRANITE FALLS C/L	BRIDGE #204	R	Category 2, > 40 mph	C
B 358	MARKET PL	SR 204	SR 9	U	Category 1, Suburban	E
B 363	CAVALERO RD	20 ST SE	LK STEVENS UGB	R	Category 2, =< 40 mph	C
B 364	MENZEL LK RD	GRANITE FALLS C/L	S. ALDER AVE (GRANITE FALLS C/L)	R	Category 2, > 40 mph	C
B 365	171 AVE NE	WESTWICK RD/100 ST SE	THREE LAKES RD/TSA BOUNDARIES B/C	R	Category 2, > 40 mph	C
C 189	WOODS CREEK RD	MONROE C/L	INGRAHAM RD (MONROE UGB)	U	Category 1, Suburban	E
C 190	WAGNER/MERO/STORM LK MONROE UGB	WOODS CREEK RD	DUBUQUE RD	R	Category 2, > 40 mph	C
C 193	88 ST SE/131 AVE SE	SR 2 OVERPASS	THREE LAKES RD	R	Category 2, > 40 mph	C
C 194	S MACHIAS RD	SNOHOMISH C/L	SR 2	U	Category 1, Suburban	E
C 195	WESTWICK RD (100 ST SE)	SR 2	171 AVE SE	R	Category 2, > 40 mph	C
C 196	ROOSEVELT RD/159 AVE SE	MONROE UGB/ MONROE C/L	WESTWICK RD	R	Category 2, =< 40 mph	C
C 197	OLD SNOHOMISH MONROE RD	SNOHOMISH UGB/ SNOHOMISH C/L	MONROE UGB	R	Category 2, =< 40 mph	C
C 198	MARSH RD	LOWELL LARIMER RD	SR 9	R	Category 2, =< 40 mph	C
C 199	LOWELL LARIMER RD	MARSH RD	EVERETT C/L	R	Category 2, > 40 mph	C
C 235	AIRPORT WY	99 AVE SE	SNOHOMISH C/L	U	Category 1, Suburban	E
C 236	BICKFORD AVE	100' NW/0 83 AVE SE	SNOHOMISH C/L	U	Category 1, Suburban	E
C 237	88TH ST SE / 92 ST SE	SR 2 OVERPASS	W END BRIDGE #633	R	Category 2, > 40 mph	C
C 251	RIVERVIEW/HOMEACRES/43	SNOHOMISH UGB	EBEY ISLAND RD	R	Category 2, > 40 mph	C
C 252	66/SKIPLEY RD/52	60 ST SE	BICKFORD AVE	R	Category 2, =< 40 mph	C
C 253	60 ST SE	FOSTER SLOUGH RD	83 AVE SE	R	Category 2, =< 40 mph	C
C 254	72/83 AVE SE	SNOHOMISH UGB/ 54 MI WEST OF C/L	52 ST SE (SKIPLEY RD)	R	Category 2, =< 40 mph	C
C 255	58 ST SE/107 AV ESE	BICKFORD AVE	SNOHOMISH C/L	R	Category 2, =< 40 mph	C
C 257	OLD OWEN RD	MONROE UGB/ 0.88 MI FROM OAKS ST	WOODS LK RD	R	Category 2, > 40 mph	C
C 258	FLORENCE ACRES/WOODS L	OLD OWEN RD	OLD OWEN RD	R	Category 2, > 40 mph	C
C 261	BROADWAY AVE	184 ST SE	SR 9	R	Category 2, > 40 mph	C
C 263	184 ST SE	SR 9	BROADWAY AVE	R	Category 2, =< 40 mph	C
C 267	CRESCENT LK/203 ST SE	HIGH BRIDGE RD	SR 203	R	Category 2, =< 40 mph	C
C 270	BEN HOWARD RD/311 AVE SE	SR 203	BRIDGE #429	R	Category 2, > 40 mph	C
C 303	LOWELL SNOHOMISH RIVER RD	EVERETT C/L	SNOHOMISH UGB	R	Category 2, > 40 mph	C
C 306	72 ST SE	SNOHOMISH UGB/ 0.54 MI FROM C/L	SR 9 OVERCROSSING	R	Category 2, > 40 mph	C
C 307	LOWELL SNOHOMISH RIVER RD	SNOHOMISH UGB/ 0.54 MI FROM C/L	AIRPORT WY	R	Category 2, =< 40 mph	C
C 324	DUBUQUE RD/LK ROESIGER RD	STORM LAKE RD	4 ST NE	R	Category 2, > 40 mph	C
C 327	THREE LAKES RD	123 AVE SE (E 1/2)/SNOHOMISH C/L	171 AVE SE	R	Category 2, > 40 mph	C
C 338	OLD SNOHOMISH-MONROE RD	161 AVE SE	MONROE C/L	R	Category 2, =< 40 mph	C
C 347	OLD OWEN RD	MONROE C/L/ 13 MI. FROM SR 2	MONROE UGB/ .88 MI. FROM OAKS ST	U	Category 1, Suburban	E
C 348	WOODS CREEK RD	INGRAHAM RD (MONROE UGB)	DUBUQUE RD	R	Category 2, > 40 mph	C
C 353	AIRPORT WY	SR 9	99 AVE SE	U	Category 1, Suburban	E
C 375	THREE LAKES RD	S MACHIAS RD	SNOHOMISH C/L	R	Category 2, =< 40 mph	C
D 200	100 ST SE	EVERETT C/L	35 AVE SE	U	Category 1, Suburban	E
D 201	35 AVE SE	SR 96 (132 ST SE)	100 ST SE	U	Category 1, Suburban	E

SA	UNR	ROAD NAME	FROM	TO	U	Category	Minimum LOS
D	202	SEATTLE HILL RD	35 AVE SE	SR 96	U	Category 1, Suburban	E
J	203	35 AVE SE	SEATTLE HILL RD	SR 96	U	Category 1, Suburban	E
J	204	35 AVE SE	168 ST SE	SEATTLE HILL RD	U	Category 1, Suburban	E
D	206	180 ST SE	SR 527	35 AVE SE	U	Category 1, Suburban	E
D	218	164 ST SW/SE	I-5 (NB RAMPS)	MILL CREEK C/L	U	Category 1, Urban	E
D	219	164 ST SW	LYNNWOOD C/L	I-5 (NB RAMPS)	U	Category 1, Suburban	E
D	220	28 AVE W	164 ST SW	LYNNWOOD C/L	U	Category 1, Suburban	E
D	222	52 AVE W	LYNNWOOD C/L	148 ST SW	U	Category 1, Suburban	E
D	223	52 AVE W/BEVERLY PARK	148 ST SW	MUKILTEO C/L	U	Category 1, Suburban	E
D	224	148 ST SW	52 AVE W	SR 99	U	Category 1, Suburban	E
D	225	148/150/JEFFERSON/MAD	SR 99	ASH WY	U	Category 1, Suburban	E
D	227	BEVERLY PARK RD	SR 525	AIRPORT RD	U	Category 1, Suburban	E
D	228	AIRPORT/128 ST SW	SR 99	I-5 (SB RAMPS)	U	Category 1, Urban	E
D	229	4 AVE W	128 ST SW	112 ST SW	U	Category 1, Urban	E
D	230	112 ST SW	EVERETT C/L	EVERETT C/L	U	Category 1, Suburban	E
D	231	AIRPORT RD	EVERETT C/L	400 ft N/o 103 ST SW (EVT)	U	Category 1, Suburban	E
D	233	100 ST SW	AIRPORT RD	330 ft W/o 23 AVE W	U	Category 1, Suburban	E
D	234	112 ST SW	BEVERLY PARK RD	PAINE FIELD WY (EVERETT C/L)	U	Category 1, Suburban	E
D	259	132 ST SE	SR 96 (SEATTLE HILL RD)	SNOHOMISH CASCADE DR	U	Category 1, Suburban	E
D	260	PUGET PARK DR	132 ST SE	SNOHOMISH CASCADE DR	U	Category 1, Suburban	E
D	284	FISHER RD/NORMA BEACH/148 ST SW	72 AVE W	52 AVE W	U	Category 1, Suburban	E
D	285	PICNIC POINT RD	BEVERLY PARK RD	PUGET SOUND BLVD	U	Category 1, Suburban	E
D	286	SHELBY RD	SR 99	BEVERLY PARK RD	U	Category 1, Suburban	E
D	287	36/35 AVE W	LYNNWOOD C/L S/o 164 ST SW	SR 99	U	Category 1, Suburban	E
D	288	ASH WY	164 ST SW	MAPLE RD	U	Category 1, Suburban	E
D	289	ASH WY	164 ST SW	134 ST SW	U	Category 1, Suburban	E
D	290	MANOR WY	164 ST SW	SR 99	U	Category 1, Suburban	E
D	291	ADMIRALTY WY	MANOR WY	AIRPORT RD	U	Category 1, Suburban	E
D	292	GIBSON RD	BEVERLY PARK RD	SR 99	U	Category 1, Suburban	E
D	293	GIBSON RD/134 ST/4 AVE	SR 99	128 ST SW	U	Category 1, Suburban	E
D	294	E GIBSON RD	GIBSON RD	128 ST SW	U	Category 1, Suburban	E
D	295	NORTH RD/2 PL W-MEADOW PL SE	164 ST SW	MERIDIAN AVE S	U	Category 1, Suburban	E
D	296	146 ST SW/SE	MEADOW RD	CASCADIAN WY	U	Category 1, Suburban	E
D	297	MEADOW RD/MEADOW PL SW	146 ST SW	MERIDIAN AVE S	U	Category 1, Suburban	E
D	298	MERIDIAN AVE S -3 AVE SE	MEADOW PL SW	SR 96	U	Category 1, Suburban	E
D	299	10 DR SE/ELGIN WAY	SR 96 (132 ST SE) (MILL CREEK C/L)	EVERETT C/L	U	Category 1, Suburban	E
D	300	116 ST SE	EVERETT C/L	35 AVE SE	U	Category 1, Suburban	E
D	301	27 AVE SE-EL CAPITAN	110' S/o 96 St SE	MERCHANT WY (EVERETT C/L)	U	Category 1, Suburban	E
D	304	LARCH WY	164 ST SW	TSA F/ 178 ST SW	U	Category 1, Suburban	E
D	310	SNOHOMISH CASCADE DR	132 ST SE	PUGET PARK DR	U	Category 1, Suburban	E
D	329	LOWELL LARIMER RD	MARSH RD	EVERETT C/L	R	Category 2, > 40 mph	C
D	334	NORTH RD	JONATHON RD	164 ST SW	U	Category 1, Suburban	E
D	336	35 AVE SE	GRANNIS RD	168 ST SE	U	Category 1, Suburban	E
D	352	4 AVE W	112 ST SW	EVERETT C/L	U	Category 1, Suburban	E
D	360	148 ST SE	PUGET PARK DR	SEATTLE HILL RD	U	Category 1, Suburban	E
D	361	AIRPORT RD	112 ST SW	1,350 ft N of SR 99 (EVT)	U	Category 1, Suburban	E
D	366	121 ST SW	SR 525	BEVERLY PARK RD	U	Category 1, Suburban	E
E	205	180 ST SE	35 AVE SE	SW COUNTY UGB/ 84 MI FROM 35 AVE SE	U	Category 1, Suburban	E
E	207	YORK RD/35 AVE SE	SR 524	164 ST SE	U	Category 1, Suburban	E
E	209	39 AVE SE	228 ST SE	SR 524	U	Category 1, Suburban	E
E	211	SNOHOMISH WOODINVILLE RD	KING CO LINE	SR 522 (EB RAMPS)	U	Category 1, Suburban	E
E	262	180 ST SE	SR 9	BROADWAY AVE	R	Category 2, <= 40 mph	C
E	264	ELLIOTT RD(HIGH BRIDGE RD)	CRESCENT LK RD	FALES RD	R	Category 2, > 40 mph	C
E	265	FALES/ELLIOT RD	SR 522	BROADWAY AVE	R	Category 2, <= 40 mph	C
E	266	ECHO LK RD	SR 522	N ECHO LK RD	R	Category 2, <= 40 mph	C
E	268	HIGH BRIDGE RD	KING CO LINE	CRESCENT LK RD	R	Category 2, <= 40 mph	C
E	269	PARADISE LK RD	MALTBY UGB/MALTBY CHRIST. E PROP LINE	KING CO LINE	R	Category 2, <= 40 mph	C
E	271	228 ST SE	39 AVE SE	SW UGB/ 45TH AVE SE	U	Category 1, Suburban	E

TS#	UNIT	ROAD NAME	FROM	TO	RA	Category	Minimum LOS
E	272	228 ST SE	SW UGB/ 45TH AVE SE	SR 9	R	Category 2, > 40 mph	C
E	330	BROADWAY AVE	MALTBY UGB/.05 MI N/o 200 ST SE	164 ST SE	R	Category 2, =< 40 mph	C
E	331	164 ST SE	SR 9	BROADWAY AVE	R	Category 2, =< 40 mph	C
E	350	180 ST SE	SW COUNTY UGB/.84 MI FROM 35 AVE SE	SR 9	R	Category 2, > 40 mph	C
E	354	PARADISE LAKE RD	SR-522	MALTBY UGB/MALTBY CHRISTIAN EASTERN PROP LINE	U	Category 1, Suburban	E
E	355	BROADWAY AVE	SR 524	MALTBY UGB/.05 MI N/o 200 ST SE	R	Category 2, > 40 mph	C
F	212	228 ST SW	LOCUST WY	BOTHELL C/L	U	Category 1, Suburban	E
F	214	LARCH WY	MLT C/L	CYPRESS WY	U	Category 1, Suburban	E
F	215	204 ST SW	44 AVE W	CYPRESS WY	U	Category 1, Suburban	E
F	216	214 ST SW/DAMSON RD	216 ST SW (BOTHELL C/L)	SR 524	U	Category 1, Suburban	E
F	217	NORTH RD	SR 524	176 PL SW	U	Category 1, Suburban	E
F	273	LOCKWOOD RD	LOCUST WY	KING CO LINE	U	Category 1, Suburban	E
F	274	LOCUST WY	KING CO LINE	228 ST SW	U	Category 1, Suburban	E
F	275	CYPRESS WY	LARCH WY	SR 524	U	Category 1, Suburban	E
F	276	LOGAN RD	LARCH WY	DAMSON RD	U	Category 1, Suburban	E
F	277	28 AVE W	LYNNWOOD C/L	LARCH WY	U	Category 1, Suburban	E
F	278	POPLAR WY	LYNNWOOD C/L	BRIER C/L	U	Category 1, Suburban	E
F	279	LARCH WY	204 ST SW	212 ST SW	U	Category 1, Suburban	E
F	280	84 AVE W	234 PL SW	220 ST SW	U	Category 1, Suburban	E
F	281	228 ST SW	80 AVE W	95 PL W	U	Category 1, Suburban	E
F	305	CYPRESS WY	LOCUST WAY	LARCH WY	U	Category 1, Suburban	E
F	311	14 AVE W	228 ST SW	END	U	Category 1, Suburban	E
F	318	14 AVE W/CARTER RD	228 ST SW	LOCKWOOD RD	U	Category 1, Suburban	E
F	332	39 AVE SE	228 ST SE	SR 524	U	Category 1, Suburban	E
F	333	228 ST SE	35 AVE SE/BOTHELL C/L	39 AVE SE	U	Category 1, Suburban	E
F	335	LARCH WAY	SR 524	TSA D/ 178 ST SW	U	Category 1, Suburban	E
F	337	YORK RD/35 AVE SE	SR 524	GRANNIS RD	U	Category 1, Suburban	E
F	376	44 AVE W/HAZEL RD	LYNNWOOD C/L	204 ST SW	U	Category 1, Suburban	E
F	379	LOCUST WAY	228 ST SW	LARCH WAY/LOGAN RD	U	Category 1, Suburban	E

Predicted AM Volumes

INT#: 192 ADT File # 1440

MISH WOODINVILLE RD @ SR 522

PSRC #: 42398000

Development Name	PFN#	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	% Occ
Bear Creek Motors	00106765	1	0	0	0	0	0	0	2	0	0	1	1	100%
Luschenshire Park	96103582	0	0	0	0	0	0	0	2	0	0	4	0	0%
Northshore School District A	97101283	3	0	0	0	0	0	0	34	0	0	14	17	0%
Snohomish Cascade SB	97110077	1	0	0	0	0	0	0	4	0	0	29	20	0%
Village At Outcrop Creek	98116556	1	0	0	0	0	0	0	2	0	0	7	1	0%
Wellington Hills Bldg A & B	02103063	0	0	30	0	0	0	4	13	0	0	48	0	0%
Woodinville II Opus	00105784	1	0	0	0	0	0	0	3	0	0	1	0	0%
Woodinville North Business Park	99115773	4	0	0	0	0	0	0	158	0	0	3	26	0%
Total		11	0	30	0	0	0	4	218	0	0	107	65	

Predicted AM Volumes

INT#: 200 ADT File # 1271

SR 9 @ 180 ST SE

PSRC #: 32893000

Development Name	PFN#	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	% Occ
Bear Creek Highlands	02107117	3	1	3	0	0	0	1	0	0	0	0	1	0%
Esplanade @ Mill Creek	02107877	0	2	0	0	1	0	0	2	0	0	4	0	0%
Glengary	98105816	0	2	1	0	1	0	0	0	0	0	0	0	0%
Kingsridge	98101933	0	1	2	0	0	0	0	0	0	0	0	0	0%
Lobo Ridge	96102249	0	0	0	0	0	0	0	1	0	0	2	1	0%
Luschenshire Park	96103582	0	0	0	0	0	0	0	2	0	0	4	0	0%
McKinney Heights	02106838	0	0	0	0	0	0	0	1	0	1	4	0	0%
Mill Pointe Apartments	99105422	0	0	0	0	0	0	0	1	0	0	3	2	100%
Northshore School District A	97101283	0	0	1	0	0	0	1	4	0	0	5	0	0%
Oulook Ridge	02109328	0	0	0	0	0	0	0	1	0	1	3	0	0%
PacLand	02107030	0	0	0	0	0	0	0	3	0	0	1	0	0%
Peterson Meadows	97106337	0	0	0	0	0	0	0	0	0	1	3	1	0%
Shaunessy	02101830	0	4	0	0	1	0	0	3	0	0	9	0	0%
Sierra Ridge	02109844	0	0	0	0	0	1	0	1	0	1	3	0	0%
Snohomish Cascade S8	97110077	1	0	0	0	0	0	0	5	0	6	54	13	0%
Sunset Meadows Estates Division I	02108624	1	1	1	0	0	0	0	0	0	0	0	1	0%
Tambark Village Div 2	02109656	1	1	1	0	0	0	0	0	0	0	0	1	0%
Tambark Village Division 1	02108978	1	1	1	0	0	0	0	0	0	0	0	1	0%
Village At Outcrop Creek	98116556	1	0	0	0	0	0	0	3	0	1	9	1	0%
Wellington Hills Bldg A & B	02103063	0	0	3	0	0	0	1	1	0	0	4	0	0%
Woodinville North Business Park	99115773	0	0	1	0	0	0	0	2	0	0	9	0	0%
Total		8	13	14	0	3	1	3	30	0	11	117	22	

Predicted AM Volumes

INT#: 202 ADT File # 697

45 AV SE @ 228 ST SE

PSRC #: 41382000

Development Name	PFN#	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	% Occ
Bellemont Crossing Div 1-4	02102305	1	13	6	0	3	1	2	0	0	1	1	5	0%
Kinsman	99110183	0	1	0	0	2	1	0	0	0	0	0	0	0%
Northshore School District A	97101283	0	18	0	2	14	1	0	0	2	1	0	0	0%
Shaunessy	02101830	0	0	0	0	0	1	0	1	0	4	3	0	0%
Snohomish Cascade S8	97110077	0	2	0	1	4	0	0	0	0	0	0	0	0%
Wellington Hills Bldg A & B	02103063	0	11	0	0	2	1	0	0	1	1	0	0	0%
Woodinville II Opus	00105784	0	3	0	0	1	0	0	0	0	0	0	0	0%
Woodinville North Business Park	99115773	0	18	0	1	3	0	0	0	1	2	0	0	0%
Total		1	66	6	4	29	5	2	1	4	9	4	5	

Predicted AM Volumes

INT#: 203 ADT File # 31

SR 9 @ 228 ST SE

PSRC #: 41110000

Development Name	PFN#	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	% Occ
Bear Creek Highlands	02107117	0	0	1	0	0	0	0	1	0	0	3	0	0%
Bellmont Crossing Div 1-4	02102305	0	0	14	0	0	0	4	0	0	0	0	0	0%
Esplanade @ Mill Creek	02107877	0	0	1	0	0	0	0	1	0	0	3	0	0%
Luschenshire Park	96103582	0	0	0	0	0	0	0	2	0	0	4	0	0%
McKinney Heights	02106838	0	0	0	0	0	0	0	1	0	0	4	0	0%
Mill Pointe Apartments	99105422	0	0	0	0	0	0	0	1	0	0	2	1	100%
Northshore School District A	97101283	0	21	0	31	17	0	0	9	28	24	0	0	0%
Outlook Ridge	02109328	0	0	0	0	0	0	0	1	0	0	3	0	0%
Peterson Meadows	97106337	0	0	0	0	0	0	0	0	0	0	2	1	0%
Shaunessy	02101830	0	0	4	0	0	0	1	3	0	0	9	0	0%
Sierra Ridge	02109844	0	0	0	0	0	0	0	1	0	0	3	0	0%
Snohomish Cascade S8	97110077	0	0	0	0	0	0	0	5	0	0	49	5	0%
Village At Outcrop Creek	98116556	0	0	0	0	0	0	0	3	0	0	8	1	0%
Wellington Hills Bldg A & B	02103063	0	0	12	0	0	0	3	4	0	0	18	0	0%
Woodinville North Business Park	99115773	0	21	0	29	4	0	0	40	122	26	0	0	0%
Total		0	42	32	60	21	0	8	72	150	50	108	8	

Predicted PM Volumes

INT#: 192 ADT File # 1440

MISH WOODINVILLE RD @ SR 522

PSRC #: 42398000

Development Name	PFN#	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	% Occ
Bear Creek Motors	00106765	0	0	0	0	0	0	0	1	0	0	2	1	100%
Luschenshire Park	96103582	0	0	0	0	0	0	0	4	0	0	3	0	0%
Northshore School District A	97101283	3	0	0	0	0	0	0	36	0	0	21	28	0%
PacLand	02107030	2	0	0	0	0	0	0	2	0	0	3	1	0%
Peterson Meadows	97106337	2	0	0	0	0	0	0	2	0	0	0	0	0%
Snohomish Cascade S&B	97110077	4	0	0	0	0	0	0	44	0	0	9	2	0%
Tambark Estates	98109480	0	0	0	0	0	0	0	3	0	0	0	2	0%
Village At Outcrop Creek	98116556	1	0	0	0	0	0	0	8	0	0	3	1	0%
Wellington Hills Bldg A & B	02103063	0	0	8	0	0	0	18	60	0	0	13	0	0%
Woodinville II Opus	00105784	1	0	0	0	0	0	0	0	0	0	2	1	0%
Woodinville North Business Park	99115773	0	0	0	0	0	0	0	52	0	0	16	161	0%
Total:		13	0	8	0	0	0	18	212	0	0	72	197	

Predicted PM Volumes

INT#: 200 ADT File # 1271

SR 9 @ 180 ST SE

PSRC #: 32893000

Development Name	PFN#	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	% Occ
Appletree Blk 2 Div 3	97109528	1	0	0	0	0	1	0	2	0	0	0	0	0%
Bear Creek Highlands	02107117	1	1	2	0	2	0	3	0	0	0	0	3	0%
Esplanade @ Mill Creek	02107877	0	1	1	0	1	2	2	3	0	1	2	0	0%
Glengarry	98105816	1	1	0	0	2	0	0	0	0	0	0	1	0%
Kingsridge	98101933	0	1	1	0	1	0	2	0	0	0	0	0	0%
Luschenshire Park	96103582	0	0	0	0	0	1	0	4	0	0	3	0	0%
McKinney Heights	02106838	0	0	0	0	0	1	0	5	0	1	2	0	0%
Northshore School District A	97101283	0	0	1	0	0	0	1	6	0	0	5	0	0%
Outlook Ridge	02109328	0	0	0	0	0	2	0	3	0	0	2	0	0%
PacLand	02107030	0	0	0	0	0	0	0	9	0	0	9	0	0%
Peterson Meadows	97106337	1	0	0	0	0	0	0	4	0	0	2	1	0%
Shaunessy	02101830	0	3	0	0	5	0	0	11	0	0	6	0	0%
Sierra Ridge	02109844	0	0	0	0	0	1	0	4	0	1	2	0	0%
Snohomish Cascade S8	97110077	8	0	0	0	0	7	0	58	0	2	14	4	0%
Sunset Meadows Estates Div 2	02108825	1	0	0	0	1	0	1	0	0	0	0	1	0%
Sunset Meadows Estates Division I	02108624	1	0	1	0	2	0	1	0	0	0	0	1	0%
Tambark Estates	98109480	0	1	0	0	2	0	0	0	0	0	0	1	0%
Tambark Village Div 2	02109656	1	0	1	0	1	0	1	0	0	0	0	1	0%
Tambark Village Division 1	02108978	1	0	1	0	1	0	1	0	0	0	0	1	0%
Village At Outcrop Creek	98116556	1	0	0	0	0	1	0	10	0	1	5	1	0%
Village At Websters Pond	98108094	1	1	1	0	0	0	0	0	0	0	0	0	0%
Wellington Hills Bldg A & B	02103063	0	0	1	0	0	0	3	4	0	0	1	0	0%
Woodinville North Business Park	99115773	0	0	0	0	0	0	1	11	0	0	3	0	0%
Total:		18	9	10	0	18	16	16	134	0	6	56	15	

Predicted PM Volumes

INT#: 202 ADT File # 697

45 AV SE @ 228 ST SE

PSRC #: 41382000

Development Name	PFN#	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	% Occ
Bellemont Crossing Div 1-4	02102305	6	8	4	0	15	1	7	1	0	1	0	3	0%
Kinsman	99110183	0	2	0	0	3	0	1	0	0	0	0	0	0%
Northshore School District A	97101283	0	21	0	0	26	1	0	0	0	1	0	0	0%
Shaunessy	02101830	0	0	0	0	0	5	0	4	0	2	3	0	0%
Snohomish Cascade S8	97110077	0	8	0	0	2	1	0	0	1	0	0	1	0%
Wellington Hills Bldg A & B	02103063	0	3	0	1	11	1	0	0	0	1	0	0	0%
Woodinville North Business Park	99115773	0	6	0	4	19	0	0	0	1	0	0	0	0%
Total:		6	48	4	5	76	9	8	5	2	5	3	4	

Predicted PM Volumes

INT#: 203 ADT File # 31

SR 9 @ 228 ST SE

PSRC #: 41110000

Development Name	PFN#	EB-L	EB-T	EB-R	WB-L	WB-T	WB-R	NB-L	NB-T	NB-R	SB-L	SB-T	SB-R	% Occ
Bear Creek Highlands	02107117	0	0	1	0	0	0	1	3	0	0	2	0	0%
Bellemont Crossing Div 1-4	02102305	0	0	9	0	0	0	16	0	0	0	0	0	0%
Esplanade @ Mill Creek	02107877	0	0	1	0	0	0	1	3	0	0	1	0	0%
Kinsman	99110183	1	0	1	0	0	0	2	0	0	0	0	1	0%
Luschenshire Park	96103582	0	0	0	0	0	0	0	4	0	0	3	0	0%
McKinney Heights	02106838	0	0	0	0	0	0	0	4	0	0	2	0	0%
Northshore School District A	97101283	0	22	0	49	27	0	0	10	29	25	0	0	0%
Outlook Ridge	02109328	0	0	0	0	0	0	0	3	0	0	2	0	0%
PacLand	02107030	1	0	0	0	0	0	0	4	0	0	4	1	0%
Shaunessy	02101830	0	0	2	0	0	0	5	11	0	0	6	0	0%
Sierra Ridge	02109844	0	0	0	0	0	0	0	4	0	0	2	0	0%
Snohomish Cascade S8	97110077	10	0	0	0	0	0	0	48	0	0	11	3	0%
Tambark Estates	98109480	0	0	0	0	0	0	0	3	0	0	2	0	0%
Tambark Village Div 2	02109656	0	0	1	0	0	0	0	2	0	0	2	0	0%
Village At Outcrop Creek	98116556	1	0	0	0	0	0	0	9	0	0	4	1	0%
Wellington Hills Bldg A & B	02103063	0	0	1	0	0	0	12	18	0	0	5	0	0%
Woodinville North Business Park	99115773	0	7	0	177	23	0	0	13	40	9	0	0	0%
Total:		13	29	16	226	50	0	37	139	69	34	46	6	